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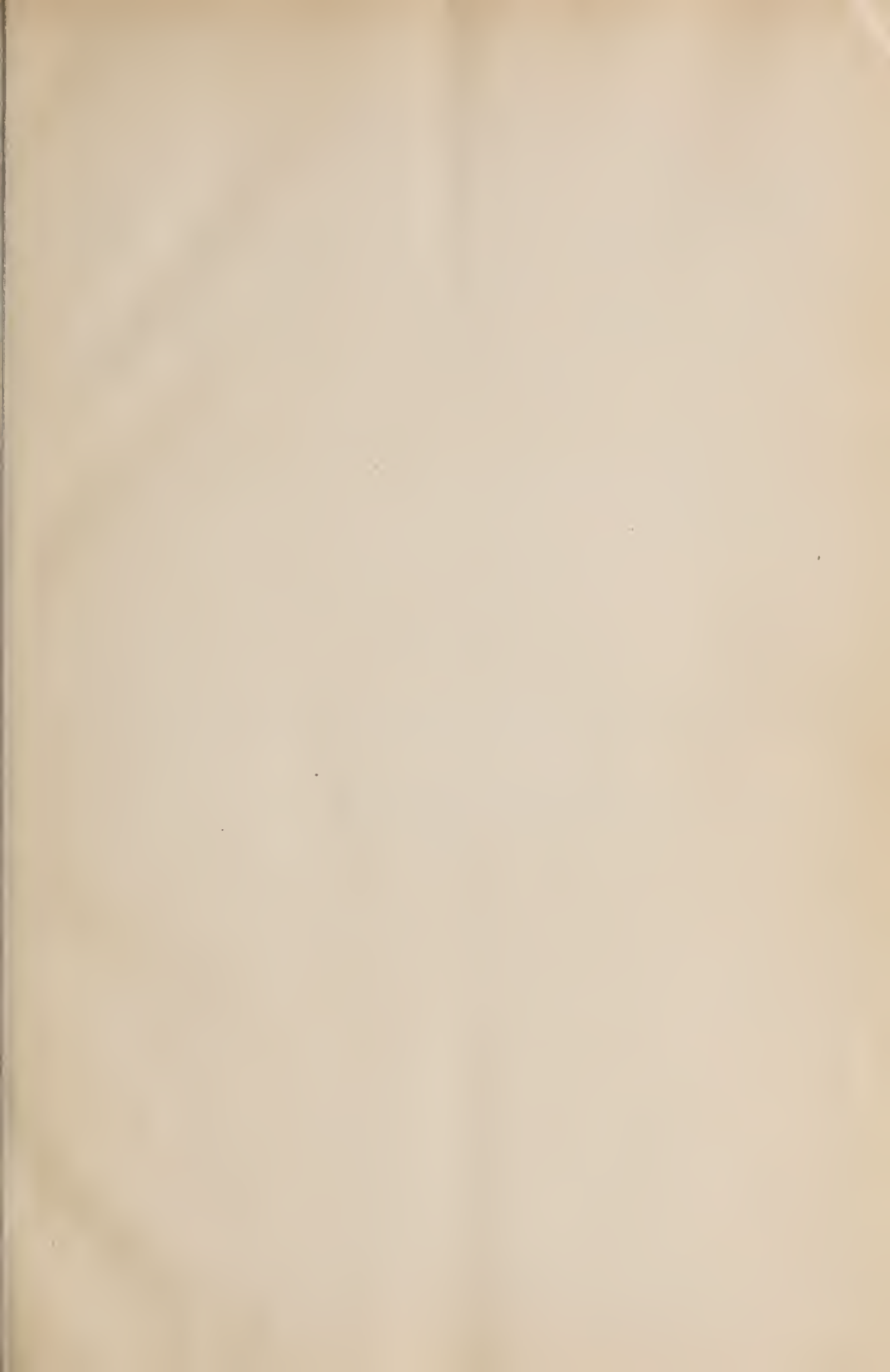
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ACADEMY OF MEDICINE.

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The Journal of the MICHIGAN MEDICAL STATE SOCIETY



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Number 1

DETROIT, SEPTEMBER, 1902

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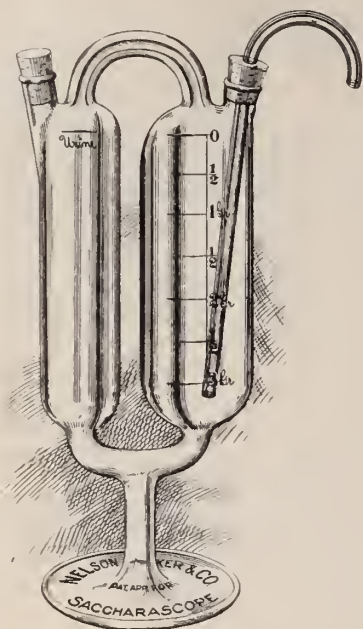
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PRESIDENT'S ADDRESS.

THE MICHIGAN MEDICAL SOCIETY.

It's First Eigthy-three Years—Present Wants, and Suggestions for their Supply.*

LEARTUS CONNOR,
Detroit, Mich.

PART I.

A year since you selected me for certain responsibilities and special work. 'Tis too much to hope that your expectations have been fully met, but you have had my constant thought, best judgment and unwearied service.

On a beautiful October day your representative laid the corner stone of the new Science Building of the Medical Department, University of Michigan—an epoch in the life of Michigan's first medical

school, by which it can better train those who shall fill our future ranks, add new resources to our science, and augment the State's reputation in the scientific world.

Realizing that you desired an increase of members and more local societies, your president and efficient secretary did what was possible to promote both objects.

Last year the American Medical Association radically changed its organization, by placing all legislative and executive power with delegates from State societies and the sections—in all one hundred and fifty. The rest of the association receive the JOURNAL (if they pay five dollars annually), take part in the scientific and social work, and listen to the addresses.

In common with other states, Michigan is asked by the American Medical Association to divide its membership in like manner; a house of delegates from the county societies and councilors for legislative and executive duty; the remainder for scientific and social purposes.

To study exhaustively these radical changes and wisely advise the proper ac-

tion. the president appointed a committee, consisting of Drs. A. E. Bulson, of Jackson, George Dock, of Ann Arbor, and Charles T. McClintock, of Detroit. Its report and that of our members of the house of delegates, American Medical Association, follow this paper, and conclude the formal presentation of the subject of our reorganization.

Standing at the close of eighty-three years with a new life more complex and highly organized than any we have known, it is pertinent to inquire: "What light does our past shed upon the future?"

Organized at Detroit under territorial law, August 10th, 1819, the Michigan Medical Society has had but two breaks in its continuous operation, viz: from 1851 to 1853, and from 1860 to 1866. Its name has varied slightly during these three periods, but it has been, under all conditions, the Michigan Medical Society.

It was one of many events that marked the origin of Michigan as an American community, based upon the permanent resources of its own industries, in spite of the planting of a colony by Cadillac on the shores of the Detroit river one hundred and twenty years previous. Others were: the first move to establish Michigan University; the first sales of land by the United States; the opening of roads towards Saginaw, Chicago, Grand River, Fort Gratiot, and the removal of the stockade about Detroit.

The moving spirit in the formation of the Michigan Medical Society was Dr. John L. Whiting—a type of the doctors who laid the foundations of our Michigan Medical Temple amid primeval forests. Born November 28th, 1793, at Canaan, N. Y., of parents who had emigrated from Norwich, Conn., he received

his preliminary training at Lebanon, N. Y., and Lenox, Mass. Thereafter for three years he studied medicine with Dr. Samuel White, of Hudson, N. Y., and was licensed by the State of New York. Turning his face westward he reached Detroit on horseback, February 26th, 1817. Endowed with great physical and mental vigor, he soon secured a large practice and commanding social influence. Conversant with the New York medical laws,* and believing them adapted to the needs of the territory, in 1819 he began the formation of a medical society among the few scattered physicians of the territory (Schoolcraft says there were but eight physicians in Detroit). Changing the New York medical laws to the new conditions, himself and friends readily secured the assent of the government as embodied in Governor Lewis Cass, Judges A. B. Woodward and John Griffin—a task made easy by the fact that these men were conversant with similar laws existing in the older states whence they had come. Whiting served long as secretary, and then as president.

Unfortunately for the medical profession, in 1832 he left it to engage with John J. Deming in the commission and forwarding business. In 1842 he became a land tax agent. Dr. Brodie said that this change was induced by the unexpected deaths of three successive cases—an event often recorded in medical annals. Dr. Whiting was ever ready in times of emergency, as in the cholera epidemics of 1832 and later, to throw aside his business and assist his professional brethren, till the crisis had passed. He died full of honor, aged eighty-seven, leaving num-

*Dr. W. W. Potter (Buffalo, N. Y.) says N. Y. State Med. Society originated in action taken by physicians in and about Saratoga, N. Y., in 1805.

erous descendants, always in the front of the hosts advancing Michigan's progress.

To grasp the far-reaching influence of this first Michigan Medical Society, it is needful to keep in mind the salient features of the physical, political, religious, social, business, and scientific conditions of 1819 in Michigan. At that date it was a French Arcadia, as described by Longfellow; an immense forest of giant trees, interspersed by silver lakes and oak openings, cleared only for a few rods along the larger rivers. Vast undrained areas were breeding places for the malarial fevers and culture beds for visiting morbid germs, as cholera, typhoid, and typhus.

Its inhabitants were mainly of the Roman Catholic faith, born and nurtured under the despotic idea of the French and British kings of that day—and so unfavorable to general education or the exercise of individual liberty.

Relations with the outside world were difficult, dangerous and expensive. Mails from Ohio were brought on horseback as late as 1826, and postage increased with the length of the route.

Trading in furs was the chief source of wealth; fishing, hunting and light farming added something to means of subsistence.

Lives of doctors were full of adventure and hardship from hostile Indians, absence of roads, the presence of deep, thick mud, and long trips incident to the sparse population. Calls to places as distant as Tecumseh from Detroit were not infrequent, occupying two days and a night, either going or coming; the night being spent on the ground rolled in a blanket, subject to calls from wolves or other uncanny natives; the Indian trail, their only guide through the dense forests. Because of scanty pay for professional work, most,

if not all doctors, were compelled to engage in some outside occupation—as the keeping of a drug store, or agent for articles of general merchandise. From such sources have sprung not a few of the large commercial houses or factories of modern Michigan.

His superior education and gentlemanly manners gave the doctor high social position and great influence in all public affairs. Thus in 1842 Drs. Zina Pitcher and Douglas Houghton, aided by Samuel Barstow, were most active in promoting the act by which Michigan established the first absolutely free system of popular education. Drs. Sager, Pitcher, and Houghton, with other doctors, were active in the steps that led to the growth of the University. Pitcher was long one of its regents; later, in an editorial in the *Peninsular Journal of Medicine*, he expressed regret that he had not held out for a nine months' course at the opening of the Medical Department, and an entrance examination equal to the literary. Both Drs. Marshall Chapin and Zina Pitcher served as mayors of Detroit and were influential in developing health interests of the city.

The leaders were picked from the best stock of New England and New York and Pennsylvania—their deeds would fill a library, and those of their descendants are a solid part of Michigan's history.

Since the chemistry of 1819 was extremely crude, and pharmacy still more, it is evident that doctors were compelled to administer remedies not always concentrated or agreeable. They lived and died in ignorance of the delight in prescribing nastiness coated with sugar or gelatine; or the satisfaction of using remedies as exact in power and definite in operating as the surgeon's knife.

Measured by present standards, neither anatomy, physiology or pathology were very helpful. Without anæsthetics, bacteriology, aseptic surgery, with imperfect appliances of all kinds, without antitoxine, the doctor of 1819 needed the best brain capacity and closest attention to details to secure satisfactory results. Since his senses were compelled to act as substitutes for the thermometer, the sphymograph, the ophthalmoscope and all other scopes, 'tis little wonder that they became wonderfully acute and that his experience added much to the doctor's practical value. Such was the house in which was born the first Michigan Medical Society. The leading features of its constitution:

1. It was a legal document, and the Society represented the Government of the Territory.

2. It prescribed the conditions for beginning the study of medicine.

3. It determined the fitness of those seeking a license to practice.

4. It formulated the offenses for which licenses were revoked.

5. It had power to execute these provisions—in short, the Society was legislative, executive, and judiciary, with police power to make all effective.

The qualifications demanded of those desiring to begin the study of medicine are stated in the Incorporating Act, By-Law 9. "The President, Senior Censor and Secretary shall form a Board to examine students in the preparatory branches of education, and give a certificate, previous to their entering upon the study of medicine. They shall meet on the second Monday of January and June, respectively. They shall keep minutes of their proceedings and lay them before the Society semi-annually. If the student has had a collegiate or academic education, his

moral character only shall be the subject for their examination. This certificate shall permit him to study with any member of the Society."

Otherwise, by specific vote, the secretary granted permission to members to take as students those with known fitness to begin the study of medicine. Thus we read in the proceedings that on June 14th, 1825, Dr. Ezra S. Parke (father of the late Mr. H. C. Parke, of Parke, Davis & Co.) was granted permission to take as a student Mr. L. B. Webster. This care for the preliminary training of perspective medical students is worthy of being copied now and evermore. One is startled to contemplate the high standing of the profession had this example of the early days of our Society become universal and continuous.

Respecting the conditions for granting licenses, By-Law 18 says: "Candidates for license to practice medicine or surgery shall give notice thereof to the President and Censors fifteen days previous to examination, and before anyone can be admitted to examination he must present to the Censors satisfactory proof that he is twenty-one years old, of good moral character, has studied the time required by law with one or more reputable practitioners, and that he has appropriated the time solely to the study of medicine and surgery. If he be a candidate for a license to practice physic, he shall be examined on *materia medica*, pharmacy, anatomy, physiology, and theory and practice of medicine; candidates for the practice of surgery shall be particularly examined on anatomy and surgery." Further, By-Law 19 says: "When a candidate shall obtain his certificate, signed by a majority of Censors, he shall present the same to the President, who shall direct him to de-

liver an inaugural address on some medical or chirurgical subject before the Society at its present or next meeting; after which he shall be entitled to a diploma under the seal of the Society, signed by the President and countersigned by the Secretary. For this he shall pay ten dollars for the use of the Society."

Licenses to practice given by other state societies were accepted if said society accepted those from Michigan—full and fair reciprocity—in operation eighty odd years ago and for a third of a century later. Why is not the same provision as fair to-day?

Certificates of dismissal were given members moving from the territory, provided they had settled their accounts and otherwise conducted themselves decorously.

For unseemly conduct a member could be expelled by a two-thirds vote; the accused having had sufficient notice to arrange his defense—unseemly conduct included gross immorality, the using of secret nostrums, etc.

Members of the Society absent from the semi-annual meetings were fined a dollar for each offense. The admission fee was five dollars; the annual dues one and one-half dollars.

Licensed physicians in any county, on application, were granted by the territorial society the right to form a local society which, within the limits of the county, had the same rights as the territorial, except that the aggrieved member had the right of appeal to the parent society, and the county society compelled to accept the decision as final.

Thus June 12th, 1827, permission was granted Drs. Cyril Nichols, Rufus Pomeroy, William Kitteridge and David Lord

to form a Washtenaw County Medical Society.

June 12th, 1831, permission was granted Drs. William Thompson, David L. Porter, E. L. Parke and Thaddeus Thompson to form an Oakland County Medical Society.

July 23d, 1835, to Drs. Hubbel Loomis, etc., to form a St. Joseph County Medical Society.

January, 1836, to Dr. L. T. Jenney, etc., to establish a Macomb County Medical Society.

January, 1836, to establish a Monroe County Medical Society.

June, 1837, to Drs. Darwin Littlefield, Hiram Alden, M. Randall, William Noneclott and Thomas Caulkins to establish a Branch County Medical Society.

April 14th, 1849, the Wayne County Medical Society—From an unpublished report of a meeting of this society, March 16th, 1850, we learn that the Censors reported that "Edmund Andrews is entitled to be received as a student of medicine by any member of the Wayne County Medical Society." Thus one of Chicago's most celebrated surgeons gained permission to begin the study of medicine from this Society.*

In 1825 the Government of Michigan was augmented by a number of councilors, elected by the people, to act in conjunction with the Governor and Judges, appointed by the general government. On that date the following changes were made in the medical law:

I. A candidate for commencing the study of medicine must be sixteen years old.

* Thus anterior to 1850 we had seven County Medical Societies; in 1902 we have fifteen, classed as County Medical Societies, or twenty-two of all sorts, not a rapid increase for over half a century.

2. He must study medicine four years ere applying for a license. In lieu of one year, a year's study in a respectable college may be accepted—after a long reign of a far lower standard we have returned to our first.

3. If coming from another state, the candidate must produce a diploma or valid evidence to show the possession of knowledge adequate to practice medicine satisfactorily—a standard such as now prevails, except the Censors deciding the fitness are different.

In 1829, the law of 1819, as amended in 1825, was re-enacted with amendments as:

1. Surgeons and assistant surgeons, U. S. A., stationed at Green Bay, Prairie du Chene, Sault Ste. Marie and Mackinac, were permitted to do civil practice without license, provided the civil doctors were inadequate to the needs of the people about the posts.

2. County societies were permitted to hold property to the extent of \$5,000, and the territorial to \$25,000.

3. Evidence was required of doctors coming from other states that they had studied as much as was required in Michigan, a fair proposition for all time.

4. Doctors unconnected with any of the legal societies were subject to the same penalties as irregulars.

5. Each of the Territorial and County Censors must be notified of a proposed examination, and a majority must be actually present, else the examination could not proceed.

6. Physicians could be tried on general charges, as infamous crimes, gross negligence, or incompetency, and if found guilty, suspended from practice under the same penalties as the unlicensed.

In 1838 the medical laws were again

revised in accord with a strong hostile public sentiment, developed by the active proselyting of the hords of quacks who sought a home in the new state. The population had risen from 7,000 in 1820, to 174,467 in 1837. Further it was a period of wild-cat money, of general extravagant inflation of everything, the projection of public and private enterprises on the scale of paranoiac. As the people were in a frame of mind to be robbed, the quacks gathered to do the job in accord with the axiom, "where the carcass is there do the vultures gather."

The revision covered the following points:

1. Jury and militia duty were repealed.

2. Fines for irregular or unlicensed practice were eliminated, though the law remained against the collection of fees by the unlicensed.

1. In 1846 another revision repealed Section 8, giving the unlicensed legal power to collect fees.

2. Physicians from other states were admitted to practice without any formalities—thus for the first time inaugurating the era of "free trade" in medical practice, an era unchecked until a recent date.

3. The requirement of four years of study was struck out—has it been restored?

4. Perhaps the most remarkable thing in this history, as related by Dr. Zina Pitcher, is a decision of the Michigan Supreme Court that "A doctor is any person calling himself such."

Even this brief account makes evident that the Michigan Medical Society no longer represented the State Government—accordingly it held its last meeting January 14th, 1851. At this meeting Drs. William Brodie and L. H. Cobb were

elected members, and Drs. George B. Russell, Randall S. Rice and Zina Pitcher appointed a committee to attend the next examination of candidates for the M. D. degree at the University of Michigan, Dept. of Medicine and Surgery—thus still trying to guard the gates of the medical profession of Michigan “that none enter unworthily.”

During this first period of existence the total membership of the Michigan Medical Society was sixty-three. In an address Dr. Pitcher says that the yearly accessions were limited to two—if correct, it explains why during thirty-two years there were so few members. Other reasons were the expense of entrance fee, five dollars, annual dues of one and one-half dollars, fines one dollar for each failure to attend the semi-annual meetings, and the tedious, difficult modes of travel, practically limiting its membership to Detroit and adjacent country. It licensed two hundred and fifty members, whose names with date of licenses we have.

Of the number licensed by the county societies we have no means of knowing, as rarely have the records been preserved. The lists of these legal societies include about all who left any permanent record upon public professional affairs, during these thirty-two years. The Society's first officers were:

President—William Brown.

Vice-President—Stephen C. Henry.

Secretary—John L. Whiting.

Treasurer—Randall S. Rice.

Censors—Ebenezer Hurd, Stephen C. Henry, Randall S. Rice.

Note that at its start this society had but five members with which to fill seven offices, so two were given two offices each. Recalling that, quacks included, there were but eight doctors in Detroit, and

scarcely more in the territory, it called for a sublime faith in these five doctors to form a medical society on the basis of ensuring a clean, well educated, honest profession in Michigan. Yet we hear it said that with a dozen physicians in a single county, it is impossible to establish a medical society. Has the nerve of our founders died out, or is it merely dormant, waiting for a galvanic current from this Society to rouse its ancestral power?

The changes of officers in this Society were very infrequent. William Brown was president seven years; William Thompson, one year; Stephen C. Henry, six years; John L. Whiting, three; Marshall Chapin, one; D. V. Hoyt, one, and Zina Pitcher, fourteen—seven presidents in thirty-two years.

Of secretaries there were but four: John L. Whiting, eleven years; Randall S. Rice, seven; E. M. Cowles, one, and J. B. Scovil, fourteen.

The records show but few papers read and few scientific discussions—the time being occupied with examining, registering, licensing, giving and receiving letters of dismissal and prosecuting offenders. The Society had its own attorney and added such other legal talent as occasion called for. It rewarded those giving evidence of violated law by assessing them with expenses if the suit failed of success, while it gave no reward for the evidence—a novel mode of administering justice.

A notable event in the Society's history was the election to membership of Dr. William Beaumont, of Mackinac, on June 14th, 1825. On August 27th, 1826, he gave the Society a report of his celebrated case of gastric fistula, with an account of clinical and chemical studies on gastric digestion, scientific observations, which

formed an epoch in our knowledge of human digestion.

In the strait uniting Lakes Huron and Michigan, on the beautiful island of Mackinac, stands a massive granite monument erected by the Michigan medical profession in 1900, when its meeting was held on the island, to express an appreciation of a colleague whose glory brightens with passing years.

January 9th, 1838, the Society voted thanks to Drs. J. G. Connell, of Jackson County, and Hiram Alden, of Branch County, for "their firmness in defending, in legislature, the privileges of the profession against the encroachments of presuming ignorance, and the disorganizing spirit which seeks to annul all vested rights, even at the expense of life of persons and property." This little side light indicates much of the practical operation of the Michigan Medical Society of that period. We have seen that it was absolute monarch of the Michigan medical profession, with power to prescribe what the student should know ere he assayed the study of medicine; what he should add to secure a license; how he should demean himself in order to retain his license; the methods by which he could be deposed; and the means by which he could be transferred to another sister medical society. But "Uneasy sits the head that wears the crown."

The Governor and Judges were men of large ability and devotion to the public good, so it was easy to induce them to enact such a law as prevailed in the states whence all parties had come. But, as ideas of individual liberty and popular government gained power in Michigan, so did the opponents of the law gain in influence. They labored in season and out to educate the people to their views. Meantime,

members of the State Society, secure in possessing the law, went quietly about their work or play. Petitions to the legislature for the repeal of one feature or another increased in number and influence; the popular press was enlisted; journals for the sole purpose of educating the public to greater liberality were scattered on all sides, until naught of value remained of the law, and its friends voted for its abolition. It does not appear what would have occurred had the individuals of the State and County Societies exerted all their energies to educate the people to the maintenance of the law. The fact remains, they did little or nothing, were utterly routed and, worse still, the echo of the affair still exhibits itself on most inopportune occasions.

Dr. Pitcher's comment was that the law induced an atrophy among the members of the Society, and stimulated conflicts among themselves to the mutilation of their own professional reputation.

* The authorities for statements of facts in this address are the unpublished record of the Michigan Territorial Medical Society, kindly loaned by my friend, Dr. C. G. Jennings. This covers a period of thirty-two years; unpublished records of Wayne County Medical Society, loaned by Dr. S. P. Duffield. Correcting and supplementing these are the Legislative Records, Compiled Laws, Supreme Court Decisions, addresses and papers in medical journals, society reports, monographs, daily papers, Pioneer Society reports, and verbal communications from the older men and women, who personally were conversant with some of the facts, or received the same from their relatives, who were participators in the same.

Part II, concluding the President's address, will appear in the October number of THE JOURNAL.

THE JOURNAL wishes to emphasize the desirability of receiving communications on matters of interest to the profession in the state, and urges the sending in of such communications.

SURGICAL ADVANTAGES.*

ANGUS MCLEAN,
Detroit, Mich.

During the past year nothing especially new has been added to the achievements of surgery, except it be that the applications of its principles are being better understood by the medical profession at large; and the profession more and more, each year, seek to have their patients receive the benefit of these principles when any important surgical interference is required.

Every doctor desires to have his patient placed under the most favorable surroundings during an operation, and it is due to this fact that so many patients are sent, or go of their own accord, to institutions where these principles are strenuously and firmly adhered to, before, during, and after a surgical operation.

In using the term "surgical advantages" in this paper, I did not have in mind that surgery has any advantages over internal medicine, or that the surgeon in any way excels the internist; but I wish to point out the advantages offered in some localities of the State as compared with other localities for operative work in surgery. The good results obtained in surgical work are not attributable to the operator alone, for a large degree of the success depends upon the surroundings; such as, former preparation of the patient, the assistance during the operation, and after care and observations.

Wherever these aids to the surgeon's success are present, and their uses are practically followed out, that will be the advantageous locality for the surgeon.

More favorable results in capital opera-

tions can be obtained in institutions where the conveniences for the proper preparation of a patient are at hand, that is, where a warm bath, vaginal douche, rectal enema, etc., can be given, as well as the field of operation properly sterilized and an antiseptic dressing applied. An operating room that is correctly heated, well lighted, well ventilated, with sterilized solutions at hand, and fitted with modern surgical appliances and an improved operating table is far superior to the ordinary room.

All of these things, together with a corps of trained nurses, a regular assistant and an experienced anesthetist, all of whom are having daily experience, must be more efficient than those who are not accustomed to this work. The after care, when the patient is under the supervision of the trained nurse every hour, when the pulse rate and temperature are accurately taken and noted, where a suitable diet is prepared by a special cook, must be superior to after care entrusted to inexperienced persons, be they ever so willing. With all of these aids at his disposal a very careless surgeon may do a successful operation.

How very different it is with the surgeons who practice in a locality where there are no hospitals within many miles of them, and they are compelled to do capital operations in the homes of their patients, however inconvenient their surroundings may be, with no trained nurse present to assist in the preparations for the operation, with no assistant at hand to aid in the work, and no competent anesthetist within several miles of them.

The diagnosis and pathology of the case may be as accurately arrived at at one place as another. The necessary manipulations may be as skillfully carried out

*Oration on Surgery, Annual Meeting, Port Huron, Mich., June 26, 1902.

in the home as in the institution, but the principles of the modern operating room are totally lacking in the former. A large degree of the success in every capital operation depends upon these auxiliary principles. The most skillful surgeon cannot meet with success, if he does not have the advantages of perfect asepsis in all of its details, before, during and after an operation.

After the operation is completed in the home the surgeon has much to overcome to prevent the family from annoying the patient, disturbing the dressings or giving improper nourishment, with no one present competent to keep a record as to what has happened during his absence. His office is several miles away from the patient's home, with no telephonic connection and many hours of his time must be spent going to and fro, but with all of these inconveniences he frequently does good work. The doctor who is compelled to do work under these disadvantages is the doctor whom the laity and a number of his fellow brethren allude to as the "country doctor."

Who is the "country doctor"? Country doctor was a term put in vogue many years ago when many a young practitioner was compelled to settle in districts distant from medical centers, when medical journals were less numerous than now, and when there was no free mail delivery and probably no postoffice near him. For this reason most of them could not keep in touch with the progress of medicine as it advanced at the medical centers and were not acquainted with the latest theories and discoveries of their profession, and so were looked upon as not being up to date, and were referred to as "country doctors," when compared to their brethren in medical centers. This

term cannot be used in this sense to-day, for within a few hours after the discovery of any scientific fact it is carried by wire and mail to every corner of the State, and there is no excuse for any physician not being acquainted with the latest discoveries in medicine.

If the lack of knowledge in the daily progress of medicine, alone, designated the country doctor, a great majority of city doctors would belong to that class, for there is a large portion of the profession of every city who does not take a medical journal or visit the medical institutions, though these places are open to them.

It is true, that the most noted surgeons of to-day come from the large cities, but it is not true that the best students, or the most efficient graduates remain in the cities, for the very best of these frequently leave the city for the outer localities. It cannot be then that this virtue, or quality, that allows the city surgeon to lead the country surgeon, lies in the man himself, but it is in the advantages and opportunities which are offered to him by his locality. It has been said, "where there is nothing great to be done, a great man is impossible." I would change this somewhat in relation to this subject and say, "without an advantageous locality it is impossible for the surgeon to become great." There have been some exceptions to this, but they are few, and were before the days of antisepsis. When it is known under what disadvantages these physicians have to do their work, they are to be admired for the amount they accomplish, but instead of receiving the admiration due them they are probably the most maligned and vilified class of people, by those who do not know their virtues, and the unfavorable circumstances under

which they have to do their work, that exist. It is not pleasant to be slandered by those who do not know you, though it be an avenue to fame.

When they do discover anything new, they have not the opportunity to present it to the profession that the city man has, and some of their discoveries are not published until they have been deprived of the credit of their discovery by an urban colleague. This has been demonstrated so often that it has been said, "that before declaring anything new in medicine, wait until the rural districts have been heard from."

The doctors in the outside localities compare very favorably with the other professions, that is, the ministry and the law, and yet we do not hear of those professions being abused and belittled, for they are on a par with the professions of the city. The "country minister" is just as close to the Lord and has just as good an opportunity to make an interesting address at any four corners of the State as though he were standing on a carved pedestal in the center of a metropolis, and so with the legal profession, for they are just as near the realms of justice, or nearer, in the rural districts than in the stately court room of a large and corrupt city.

Now, what is to be done for the local surgeon, that he may have an opportunity to display his skill? Give him the same advantages that his brother in the larger town has; that is, give him a hospital and its equipments in his county. There are a number of urgent cases that die every year throughout the State for the want of a proper place to take care of them. By urgent cases, I mean cases that require immediate surgical relief, namely, strangulated hernia, extra-uterine pregnancy

with ruptured tube, penetrating wounds, acute appendicitis, ulceration of the intestinal walls in typhoid fever, intestinal obstructions, etc. All are agreed that the success of the operation in these cases depends upon early surgical interference. If these cases have to be transported across the State, or from one end of the State to the other, it takes up valuable time, at the expense of the patient's vitality and the golden opportunity to save a life is lost.

Every county should have a surgical hospital with a trained nurse and a competent assistant in attendance, where the surgeons of the locality could take their urgent cases. There are many counties in this State that do not have a hospital within many miles of them.

The State and counties spend large sums of money in erecting buildings and furnishing equipments so that the medical students may be well instructed in pathology and the principles of surgery, but neither the State nor county spends any money in furnishing them a proper place to do their work. The State appropriates annually large sums for erecting and maintaining institutions and homes for the aged, poor, blind, deaf and dumb, etc., a class of people who are not as valuable or as useful as those who so frequently demand immediate surgical relief. These urgent cases usually happen among active adults who are valuable and producing citizens.

There is but one State hospital in Michigan and that is located in one corner of the State and very few counties have a hospital of any kind.

These hospitals could be erected in the center of each county that requires one, at a moderate cost, and the patients could easily be taken there. These patients would not feel then as now that they are

being taken away from their friends, but that they were right among them, and they would not suffer from the mental shock that they do now when they are sent hundreds of miles from home. If the local surgeon did not feel competent to undertake the operation he could send for any surgeon whom he chose and the patients would have the benefit of letting the surgeons take the journey instead of taking it themselves. With an institution of this kind the country surgeon would develop just as a city surgeon has, and would be just as competent. A few of those valuable lives saved each year would more than compensate for any expense incurred in sustaining a hospital of this kind.

If some wealthy philanthropic citizen were to build a few hospitals of this kind in needful localities, he would erect a monument for himself, that from a point of virtue, would tower far above the libraries of Andrew Carnegie. When the State does so much for those who are mentally, visually or senilely afflicted, why should they not do as much for those who are "surgically afflicted"?

If some such plan as this were followed out it would equalize the opportunities to do surgical work and no doubt some local surgeon would be equal to the occasion and grasp the opportunity. There are doctors in every locality who do not take advantage of the opportunities offered them and a large percentage of these live in our large cities.

These plans that I have suggested of equalizing the opportunities to do surgical work may not be thought practical by some, but I do know that just as good physicians locate in these small places as settle in our cities, and if the city surgeon in time excels his brother of the country, it is due to the advantages of the former and

not to any superior knowledge or virtue that he possesses.

Until the local surgeon is given the same advantages to do work that his city brother has, I do not think that the laity or his professional brethren of the city should belittle or refer to him as the "country doctor," using this term as though it related to a physician or surgeon who was incompetent.

Arrange matters so that the outside surgeon shall have the same advantages that are offered to those of the city, and I will guarantee that his success will compare favorably with that of his city brother, and many lives that are now forfeited through delay and improper surgical surroundings, will be saved, and they will remain useful citizens to their community, owing to an opportunity to receive the benefits of modern surgery and its auxiliaries.

In response to many inquiries, THE JOURNAL wishes to announce that reprints of articles will be furnished at cost price.

At the annual meeting of the Society, Port Huron, June 26th, 1902, before the Section on General Medicine, the following symposium was delivered:

DISEASES OF THE KIDNEYS.

(a) Etiology. Mortimer Willson, Port Huron.

(b) Diagnosis. John E. Clark, Detroit.

(c) Complications:

Uraemic. John McLurg, Bay City.

Ocular. Walter R. Parker, Detroit.

Cerebral. Irwin H. Neff, Pontiac.

(d) Treatment. Joseph B. Whinery, Grand Rapids.

Discussion opened by George Dock, Ann Arbor, and J. H. Reed, Battle Creek.

ETIOLOGY OF KIDNEY DISEASE.

MORTIMER WILLSON,
Port Huron, Mich.

It may not be unprofitable at the beginning of this discussion to review the main facts in the anatomy and physiology of the kidney.

The essential elements in the structure of the kidney are the glomeruli or Malpighian bodies, the uriniferous tubules, and the blood vessels. These are bound together by the connective tissue into one mass. The glomeruli are tufts of blood vessels covered over by a reflexion of the terminal portion of the membrane of the uriniferous tubule. This reflexion is called the capsule of Bowman, and the space between the folds forms the first of a series of reservoirs, the collecting tubes being next, then the pelvis of the kidney, and lastly the urinary bladder.

After emerging from the glomeruli or capsule of Bowman, the uriniferous tubules pursue a devious course and are conveniently divided into the distal convoluted tubule, the descending limb of Henle's loop, the ascending limb of Henle's loop, and the proximal convoluted tubule which opens into one of the collecting tubes.

In the capsule of Bowman and the distal convoluted tubule, the epithelium is of the squamous variety and has indistinct nuclei. In the ascending limb of Henle's loop and the proximal convoluted tubule, the epithelium is polyhedral in form and striated in structure, with distinct nuclei situated near the lumen of the tube.

This difference in the form and structure of the epithelium can comport only with a decided difference in function. If indigo-carmin be injected into the blood

vessels of a dog, and the kidney be soon after examined, it will be found that the polyhedral cells have selected and removed a portion of the substance from the blood, and are discolored by it, and even the lumen of the tube filled with it; whereas the distal convoluted tubule and the descending limb of Henle's loop are not colored by it, the squamous epithelium lining these parts having no affinity for it. Now the probable physiological functions of these portions are as follows: The main function of the polyhedral epithelium is to secrete and excrete urea; that of the squamous epithelium in the capsule of Bowman and the first portion of the tube is to eliminate water and salines. The location of this apparatus, distal to that of the urea secreting portion, gives an abundant and suitable menstruum for the solution and washing away of the urea as it is extruded into the lumen of the lower tube. In the avian and reptilian kidney the water excreting apparatus is deficient or wanting and the uric acid and urates are thrown off in the form of a paste.

Now it has been shown that this is really the process by ligating the ureters, and thus checking the current of water through the tubes. When the kidneys are examined after this has continued for some hours, the urea is found only in the tubes and in a semi-solid condition, often in such quantities as to give the kidneys a whitish appearance. But no urea is found in Bowman's capsule. The function of these parts being so distinct, it would be likely that they would re-act in different ways to any morbid agent.

There is possibly here an example in the evolution of the kidney of that conservative or protective arrangement found in other organs of the body; as the

change of epithelium in the bronchi and air vesicles, whereby inflammatory processes are limited.

The kidneys are the channel by which some of the most toxic of the products of catabolism are eliminated from the body. The renal tissues are tolerant of the toxics when they occur in normal amount, and so no disturbance of function takes place. Aside from traumatism, disease of the kidney may be caused by, (1) the invasion of the organ by bacteria; (2) the presence of toxins natural to the urine, but in quantities so large as to be injurious to the capillaries of the glomeruli or epithelium; (3) toxins produced by general or local disease; (4) toxins produced by perverted or arrested chemistry; (5) poisons taken by the stomach.

It is easy to understand how disease germs may reach the kidney from the urethra or bladder. The typhoid and colon bacilli have been found in the congested or inflamed kidney, showing that there may be an invasion of disease germs by way of the blood vessels. But the chief factor in the production of disease of the kidney is toxæmia, whether the toxic elements are those which are normally eliminated by the kidneys, but in quantities sufficient to overtax and irritate the tissues, or toxins diverted to the kidneys which should be eliminated by other organs, or the toxins of infectious diseases.

Exposure to cold is given in all textbooks as a cause of nephritis, but it is not the cold that causes the disease. Only when the chilling of the skin and blood results in an arrest of dermic excretion, and a perversion of tissue metabolism whereby the toxicity of the blood is increased to an extent that irritates and injures the kidney tissues, is inflammation induced.

No doubt the temporary congestion arising from increased blood pressure is a contributing cause in these cases, but not this alone nor the cooling of the blood of itself will directly produce nephritis.

So in long continued gastroenteritis the vitiation of the secretions, the ptomaines of putrescent intestinal contents produce such a toxic condition of the blood that kidney disease very often results. This is a complication very often overlooked. That typhoid fever is very often a cause of kidney disease of at least functional character, any one who makes urinalysis a routine practice in all febrile diseases will soon discover.

During a recent epidemic in this city, I found albuminuria in 40 per cent. of my cases at some time during the second week of the disease. In one case I found albumosuria, with no bone lesion of any kind. So it will be found that the toxins of many febrile diseases produce very decided kidney symptoms.

Among the etiological factors in the production of kidney disease are usually enumerated errors of diet, overwork, and mental strain. But these are antecedents to a common condition; that is, perverted assimilation and excretion with a lowering of the sum total of vitality.

The toxine of diphtheria very often produces secondary disease of the kidney, and this is sometimes further aggravated by cardiac weakness.

It is well known that men in certain occupations where they are exposed to the fumes of phosphorus, arsenic, mercury, lead, or turpentine may suffer functional or even organic renal injury. It makes no difference in the effect whether these poisons are gradually taken into the system as a result of man's occupation or whether they are taken in quantity by the stomach, the amount in the blood plus the

duration of toxic action determines the effect of injury.

Gout and rheumatism, if not caused by, are accompanied by an excess of uric acid, which by its irritating effect on the kidneys is predisposing to disease. Doubtless these diseases are accompanied by other and undetermined toxins in the blood, which may be still more potent in the production of kidney disease than an excess of uric acid.

Among infectious diseases, scarlatina is most frequently a cause of nephritis, while in measles it is seldom noticed, and is very rarely met with in rotheln.

The nephritis does not seem to depend on the height of the fever or the intensity of the exanthema; for very frequently we have a pronounced nephritis in mild cases in the second week, and very severe cases may run their course without albuminuria.

The explanation lies in all probability in the greater resisting power of the kidney in some people than in others. Smallpox very often causes nephritis, but not so frequently as scarlatina. The form of nephritis in these cases is mostly desquamative, but in some of the fatal cases we find exudative or productive nephritis.

Those who make urinalysis an almost routine practice in all serious disorders will find the kidney very frequently effected in the eruptive or secondary stage of syphilis. Of course in the tertiary stage the kidney, like all other organs, may be the seat of gumma; but in the secondary stage we have albuminuria, and frequently true nephritis. It is rare in such cases to have the oedema that is so frequently a symptom of scarlatinal nephritis. Why this is so it is not yet possible to say. Whether the oedema is due to the uremia or to other toxic materials,

or to the differentials in salines or pressure is still problematical.

In all these cases where nephritis is caused by or occurs in the course of the infectious disease, it is the toxins of the disease that in reality produce the injury to the kidney.

The kind and intensity of the toxic elements will to a great extent determine what the extent of the injury may be, and what particular form the nephritis will assume. Some toxins acting more on the blood vessels will cause productive nephritis, while others acting more on the renal epithelium will cause parenchymatous nephritis. If the glomeruli are principally involved we have a more or less transient albuminuria.

It is undoubtedly true that heredity plays an important role in the etiology of nephritis. Not the inheritance of disease, but the low vitality and the small resisting power of the kidneys to injurious influences is here meant. As in consumption, it is simply a deficiency that is inherited, not a disease. This fact is sometimes obscured by the peculiarity manifested at all times in all heredity traits; that they are liable to skip one generation to appear in the next.

Hitherto the consideration has been given in this paper to those diseases of the kidney of an inflammatory character. One of the most important of kidney troubles that afflicts mankind is calculus. Though in its incipency it can scarcely be called a kidney disease, yet it may prove one of the most grave causes of injury or destruction.

The causes that lead to calculi are irritation of the lining membrane of the tubules or pelvis whereby too much mucus is secreted, and this uniting with amorphous urates and other elements form a

nucleus on which uric acid crystals and other crystalizable substances form.

Then the pressure of the calculus will be a source of irritation and traumatism, and so grave renal disease may arise.

To epitomize: renal disease is caused by the invasion of bacteria, or by some toxic or irritating material in the blood. Unusual or long continued increase in blood pressure will greatly aggravate the injurious effects of these toxics. In fact, a long continued congestion, due to cardiac insufficiency, will so change the function and nutrition of the renal tissues that organic disease of very grave nature may result.

DIAGNOSIS OF DISEASES OF THE KIDNEYS.

JOHN E. CLARK,
Detroit, Mich.

The topic assigned to me and the time allowed bear such relation to each other that it will be impossible to consider anything more than the most important affections of the kidneys from a diagnostic standpoint.

A complete classification of diseases of the kidneys involves the following heads:

1. Renal congestion.
2. Renal hemorrhage (including infarctions).
3. Bright's diseases.
4. Pyelitis.
5. Hydronephrosis.
6. Cystic kidneys.
7. Precipitates and concretions (renal calculi).
8. New growths (cancer, etc.).
9. Parasites.

I will eliminate from this classification the rarer organic and functional troubles and confine myself almost entirely to con-

sideration of that scourge of middle and modern life, Bright's diseases of the kidneys. Originally, as is well known, this name was given to all conditions characterized by the presence of albumin in the urine. Experience has shown, however, that so far from indicating in all cases what is now called Bright's disease, albuminuria is often but of slight importance. Ralfe makes the statement that "functional" albuminuria constitutes from one-half to one-third of all the cases of albuminuria that come under notice. I decidedly endorse this opinion. My experience with a large number of cases leads me to believe that even a larger percentage are merely functional; of renal insufficiency or increased arterial tension without any serious renal lesions. There is scarcely a prevalent disease of zymotic, traumatic, inflammatory or toxic origin which will not at some period in its course show traces of albumin in the urine, if careful and constant analysis be had. These Bright's diseases in their protean forms are rapidly coming to the front as competitors of tuberculosis for the horror and destitution of mankind and, unfortunately or fortunately, are mostly confined to the leisure class or the class of patients to whom work in the way of physical exercise is almost unknown. These diseases become chronic chiefly with the high-livers, the brain-workers, and the men about town; the laborer, farmer, artisan only occasionally falling a victim. The acute and sub-acute forms which are of the same nature most frequently are caused by exposure, cold, dampness and poor diet. Often these forms are caused by irritating medicines, such as copaiba, phosphorus, arsenic, lead, mercury, and I have had one instance following nitrate of silver.

An important symptom of renal disease mentioned in the text-books is pain in the back. I fear that I am somewhat heterodox when I state that in no single instance in my experience have I met with this as a prominent symptom. In fact, I am convinced that pain in the back is not a symptom of either acute or chronic nephritis, and that when it does occur it has no reference to kidney disease but is merely a more or less marked lumbago.

Distinction between acute and chronic forms of Bright's disease is readily made from the history of the patient and the character of the onset of the disease. They have nearly the same subjective and objective symptoms, modified of course, but no clearly defined line of demarcation.

Of the acute forms Delafield describes three varieties:

1. Acute degeneration of the kidney.
2. Acute exudative nephritis.
3. Acute productive nephritis.

There are two prominent varieties of the chronic form:

1. Exudative chronic nephritis.
2. Non-exudative chronic nephritis.

Some writers insist upon many different varieties of renal lesions under these heads, but to the every-day practitioner any attempt to diagnose these sub-varieties with accuracy is difficult and often impossible.

Of the thirteen different lesions which are recognized by the expert, each may be classified under one of the above heads without materially interfering with the necessary therapeutics.

Exudative chronic nephritis is probably better known as "chronic parenchymatous nephritis," fatty degeneration of the kidney, or chronic diffuse nephritis.

The other, non-exudative nephritis, has been variously termed chronic interstitial

nephritis, sclerotic kidney, gouty kidney, small granular kidney, etc. These two conditions deserve more than ordinary attention inasmuch as the majority of deaths from chronic renal disease are either the interstitial or parenchymatous variety.

Exudative chronic nephritis is a disease characterized by marked degenerations of the glomeruli as well as the epithelial lining of the renal tubules. There is degeneration and desquamation of the tubular epithelium, kidney is enlarged, pale, and capsule non-adherent in many cases. It is this form of Bright's disease where inter-tubular tissue is involved that we have such marked edema and dropsical effusions. In advanced cases the diagnosis is easy. There are two well marked stages, active and passive, or non-active, and the course of the disease is characterized by frequent transpositions from one stage to the other.

The most marked prodromata in the incipient stage are the lassitude with headache and slight vertigo, which are the symptoms which bring the patient to consult the physician. An examination of the urine at this stage will show the color abnormally high, quantity very small, specific gravity as high as 1030, albumin abundant with large hyaline and coarse granular casts and considerable amount of cast debris. As the disease progresses fatty casts make their appearance.

Following the lassitude and headache, symptoms of dropsy develop, puffiness of the hands and eyelids and a general anasarca follow. About this time disturbances of digestion make their appearance, such as nausea, hyperacidity and flatulence, then insomnia, hemorrhages and uraemia with convulsions.

A most characteristic symptom is the

activity of the disease at times, followed by a retardation so marked as to give the patient false hopes of recovery. Its diagnosis by urinalysis is not difficult, albumin is abundant, from one-half to four per cent. by weight; when it exceeds two per cent. it will solidify when heated in a test-tube. Blood may be present if the disease be complicated by an acute process.

Of the non-exudative or interstitial nephritis, urinalysis shows urine color of water, and the quantity very large, specific gravity very often below 1005, albumin frequently absent. Careful examination may at times discover a trace. As a rule, no casts are found, but by the aid of the centrifuge occasionally hyaline casts may be discovered. It develops slowly and insidiously and like the exudative variety it is first characterized by a lassitude and muscular weakness. Excessive arterial tension with cardiac complications ensue. Often the first symptoms to which the physician's attention is directed by the patient is the precordial disturbances. A physical examination may show accentuation of second sound of the heart with hypertrophy of left ventricle.

There is present the same digestive disturbances as in the parenchymatous form, severe headache and ocular disturbances, but no noticeable edema is present. Occasionally a slight puffiness of the ankle is noticeable. In the interstitial form even an advanced stage of the disease may be accompanied by considerable mental and bodily activity, pulse is high, walls of the vessels thickened, tension increased. There is sleeplessness, failing vision and shortness of breath. Diarrhoeas are serious and frequent, hemorrhages from the nose or into the menin-

ges may occur, tinnitus aurium is not uncommon. Diagnosis by urinalysis is difficult owing to the fact that the urine, except in quantity, is not far removed from normal. A large amount of albumin in urine and a marked edema argue against this form of disease. There is no disease in which an unfavorable prognosis is more justified, provided a correct diagnosis is obtained, but many autopsies have demonstrated that degeneration of the kidney often fails to follow a manifestation of many or nearly all of the symptoms above enumerated, while on the other hand an advanced structural derangement of the kidney may be present with but simple gastric irritability as an indication.

By far the most important means of diagnosis of renal disease is urinalysis; this, however, has its limitations. Diagnoses based on this entirely may be quite erroneous. The time is past when the discovery of albumin in the urine authorizes the physician to give fatal prognosis, in fact, the presence of hyaline or granular casts in combination with the albumin, which is much more indicative of serious renal disease, should only warrant a more careful review of all concomitant symptoms before a positive diagnosis be given. I do not wish to detract in any way from the importance to be attributed to the presence of albumin and casts as a valuable factor for determining grave kidney disease, but I consider there are other indications as necessary of determination. Diseases of secondary importance, by this I mean those from which recoveries are frequent, are often accompanied by excessive quantities of albumin and various casts, no special cast being characteristic of any given disease. An acute parenchymatous metamorphosis of the kid-

ney is characterized by abundant albumin, while a more serious condition, such as interstitial nephritis, gouty, waxy, sclerotic kidney, diseases almost invariable fatal, usually show no albumin and negative results on microscopical examination. As a rule in these cases, no casts are found, or only an occasional hyaline, while diphtheria, measles, fevers, erysipelas, small-pox, acute infectious diseases, articular rheumatism, gout, lobar pneumonia, pyaemia, endocarditis, dysentery, carbuncles, suppurative processes, lead poisoning, etc., not only respond to the test for albumin but also give at some time in the course of the disease many and various casts.

Albumin also occurs transiently in moderate quantity in other conditions. It is often found following grip, accompanies dyspepsia, and I have frequently found it in the urine of athletes after exertion. In these cases it is probably due to a vaso-motor-paralysis with renal capillary relaxation.

Dr. J. F. Henkel, of Detroit, has recently drawn my attention to a case in which the administration of mercury is followed by hyaline and granular casts. They disappear when the administration is stopped.

I believe that the rapidity with which certain substances are eliminated by the kidneys is an exceedingly valuable aid in diagnosis. It has been shown by Bassett, *New York Medical Record*, that in chronic nephritic conditions there is a retardation in the elimination of many substances by the kidneys. I have made many experiments, more especially with the iodides, which are eliminated in from a few minutes to as many hours. The iodide of potassium is probably the most satisfactory to experiment with, although

other substances, such as the turpentine, salts of quinine and bromides, asparagus, etc., give very satisfactory results. My experience with iodide of potash is such as to justify the statement that within reasonable limits the time required for its elimination is in direct ratio to the degree of chronic nephritis. To detect the iodides or bromides, all that is usually required is the addition of chlorine water and bi-sulphide of carbon to the urine.

The centrifuge marks a new era in urinalysis, inasmuch as it permits approximate results to be quickly known. It is unscientific and cannot be relied upon in quantitative work, but is of especial value in presenting for microscopical examination urine sediment. We also have new methods for detecting the presence in small quantities of albumin in the urine. It is well known that of all the multitudinous re-agents used for the detection of albumin none are quite so satisfactory and safe as Heller's modification of the heat and nitric acid test, the well known zone test. This has not met the popular approval to the extent it warrants, owing to difficulty of its application, which necessitates underlying the urine with a stratum of nitric acid. To facilitate, an admirable little apparatus called "Horismascope" has been devised and answers the purpose of detecting minute quantities of albumin. F. A. Thompson & Co., Detroit, present a simple, cheap and effective design for the same purpose, which avoids the annoyance usually attending the application of the zone test.

There is little doubt but that the X-Ray will be added to the armamentarium of the physician as a very effective means of diagnosis in the chronic varieties of Bright's disease. The enlarged kidney of the parenchymatous form, it is

claimed by some, can even now be determined from the interstitial in thin and emaciated subjects, and considerable work has been done with this end in view. Skiagraph shadows of the kidney in adults have been found very indistinct, but with children some quite satisfactory results have been obtained. This, be it remembered, in the immediate past. May we not hope that the progress of the last few years may be but the inception of what shall prove to be a glorious future for this mode of physical diagnosis?

URAEMIC COMPLICATIONS IN DISEASES OF THE KIDNEYS.

JOHN MCLURG,
Bay City, Mich.

Before taking up the uraemic complications of kidney diseases, I will refer to the etiology and pathology of uraemia. Is it an auto-intoxication due to the retention in the blood of the ordinary urinary salts, as urea and other products of tissue metabolism, or is it due to the toxic products resulting from the perverted function of diseased kidneys?

The most generally accepted view is that it is due to accumulation in the blood of excrementitious material which should be carried off by the kidneys.

Cases of obstructive suppression of urine throw a good deal of light on the pathology of this condition. In these cases the absence of marked symptoms of uraemia is very striking. Cases are on record in which, though there was total suppression for several days, not a single bad symptom was observed. Dr. W. Mitchell Stevens, of England, reports a case of death due to obstruction of both ureters by calculi. For seven days not a drop of urine was passed, nor could any

be obtained by catheterization. The only symptoms observed were a gradual and progressive loss of muscular strength, gradual enfeeblement of the pulse and respiration, slightly contracted pupils and obstinate constipation. There was no nausea, vomiting or twitchings. The mental condition remained clear to the last and the immediate cause of death was probably respiratory failure.

In non-obstructive suppression, although a small quantity of urine may be passed, the cases as a rule end fatally in a few hours or a day or two, and uraemic symptoms are prominent.

It is obvious, therefore, that uraemia does not depend solely on an accumulation in the blood and tissues of the body of the excretory products, such as urea, which is normally excreted in urine. In non-obstructive cases the suppression is due to acute pathological changes in the kidneys.

In obstructive cases the suppression is due to a mechanical cause outside the kidneys, which may be perfectly healthy and which will resume their normal function on the removal of the obstruction.

In cases of obstructive suppression the excretory function only is in abeyance, whereas in non-obstructive suppression some other function besides excretion is affected. Of course the abolition of the excretory function alone will cause a fatal result, but this is only delayed for some days, in one case twenty-two days, and the symptoms of uraemia are late in appearing and may be absent for as long as ten days or more, and then are not pronounced. Convulsions and coma rarely occur and the mind remains clear to the end. The explanation of this probably is that the kidneys are practically healthy and carrying on their other functions.

These other functions are possibly due to some internal secretion which has some influence on certain metabolic processes as yet unknown (Stevens).

Large quantities of urea may be administered to healthy animals without causing uraemic symptoms.

Causes.

The conditions of the kidneys which cause uraemia are the various forms of Bright's disease, and most commonly the chronic form.

Symptoms.

The symptoms of uraemia are mostly all referable to the nervous system but manifest themselves in various organs and parts of the body.

They are headache, nausea, vomiting, dyspnoea, irregularity of heart, impairment of vision, uraemic amaurosis, convulsion, coma, transient aphasia and sometimes acute mania.

The headache is usually occipital and extends to the neck. It is often one of the earliest symptoms.

The gastro-intestinal symptoms are often very marked and the vomiting sometimes uncontrollable and thought to be due to the action on the gastric mucous membrane of urea, as carbonate of ammonia, into which it is decomposed, is found in the vomited matter.

The dyspnoea is usually paroxysmal and worse at night. It is generally called renal asthma. Cheyne-Stokes breathing is quite common.

The pulse is usually slow, but during and after a convulsion is rapid and weak.

Impairment of vision in these cases is generally due to albuminuric retinitis, but in some cases we have complete blindness with no appreciable change in the retina, the visual centers being affected by the

toxic elements. These cases generally recover their vision in a few days.

Convulsions are the most common and severe symptoms of ureamia and they generally come on suddenly and unexpectedly, being often preceded by headache. They are apt to recur at short intervals, the patient being unconscious between the seizures. They may cease for a time as the disease progresses.

Coma.—A convulsion sometimes ends in coma, but this may develop gradually without any convulsion. Headache is usually a prodromal symptom of coma and this may come on without any intimation of previous renal disease.

Aphasia may be the precursor of convulsions or coma. It occurs most often in children in cases of scarlatinal nephritis. It is generally transient in character. Some of the other symptoms of uraemia are intense itching of the skin, aching pains in the legs, cramps in the calf muscles, especially at night.

It has been my experience that where there is much general odema the uraemic symptoms are absent altogether or not nearly so prominent. One of the worst cases of uraemia that I have ever seen had not the slightest odema during the progress of the disease.

OCULAR MANIFESTATIONS OF NEPHRITIS.

WALTER R. PARKER,
Detroit, Mich.

The ocular conditions arising from disease of the kidney which are of the most interest to the general practitioner are uraemic blindness and retinitis albuminurica.

In uraemic blindness the patient declares that everything becomes dark be-

fore his eyes; the disturbance of sight increases so rapidly that the blindness gets to be complete within a few hours. Eye examination is negative. After one or more days the sight is gradually restored. Coincident with the attack of visual disturbance, other nervous symptoms characteristic of uraemia manifest themselves. The lesion is probably central, being produced by the poisonous action on the nervous centers of material accumulated in the blood as a result of the diseased kidney.

The most characteristic of the inflammations of the retina is albuminuric retinitis. In addition to the general signs of retinitis, such as haziness of the retina and nerve, changes in the retinal vessels and hemorrhages, it is particularly distinguished by the white patches in the fundus, arranged as a stellate crown with the mammula lutea as its center. The pure white appearance is due to the fatty degeneration of the retinal elements and of the exudate.

Every form of kidney disease which results in albuminuria may be complicated with retinitis, but the one most frequently so complicated is the atrophic kidney of chronic interstitial nephritis. It is rarely found in the so-called large white kidney, more rarely still in acute nephritis, as seen in pregnancy after the acute exanthemata, especially scarlet fever; and less frequently in variola, measles, erysipelas, diphtheria or lead poisoning.

Both eyes are almost invariably affected and so characteristic is the picture in typical cases that from it alone the diagnosis of albuminuria may be made. Many cases, however, do not show this characteristic appearance so that the etiology of the retinitis is determined only by the examination of the urine.

The period of the renal disease at which the retinal changes develop has not been accurately determined, but in many cases it corresponds to the cardiac hypertrophy.

The connection between the kidney lesion and the retinitis is said to consist in a development of a disease of the walls of the vessels in the retina, in consequence of the altered composition of the blood, a disease which results in inflammation and degeneration of the retina itself.

Theodor holds (Norris and Oliver) the main factor in the pathogenesis of albuminuric retinitis to be an arteritic process of all the blood vessels of the eye, with narrowing of the lumen, especially of the smaller vessels.

The severity of the retinitis bears no fixed proportion to the intensity of the kidney disease, nor to the amount of albumen in the urine. The retinitis may improve while the kidney lesion grows worse, or the reverse may be the case. As a rule, however, the proportion is direct and in chronic cases a marked albuminuric retinitis is of evil prognostic significance.

The retinal involvement makes itself known to the patient only by a loss of vision, the acuity of which is more or less variable.

If the improvement does not depend on a betterment in the kidney disease, it does not last. Blindness almost never results, the retinal disease being of graver prognosis in regard to life than to vision.

In acute cases, as in pregnancy, and after scarlatina, the retinitis clears up as the kidney lesion improves, leaving little or no trace behind.

In chronic cases, however, a different picture presents itself. From ten to fifteen per cent. of patients suffering from

chronic nephritis have albuminuric retinitis.

The prognosis is always very serious. Seventy to eighty per cent. die within twelve months from the date of the onset of the retinal disease, and ninety per cent. within eighteen months. Depending upon the nature of the kidney lesion and the conditions under which the patient lives, a few may survive several years.

Nothing can be done in the way of local treatment, other than protection by means of colored glasses.

THE CEREBRAL COMPLICATIONS OF KIDNEY DISEASE.

IRWIN H. NEFF,
Pontiac, Mich.

When considering the cerebral complications of kidney disease, it is well to emphasize these facts:

(1) Any syndrome which may develop is often more or less diversified and atypical.

(2) The variation in symptomatology is dependent upon the extent and multiplicity of the lesions.

(3) The symptoms are not always dependent on uremia, or the retention of effete products; and are not infrequently expressions of the generalized arterial fibrosis, which often accompanies chronic renal disease.

If we have these principles firmly fixed in our minds, we have a good working basis for the brain symptoms of kidney troubles. The cerebral complications of renal disease are dependent upon toxæmic states, localized or generalized oedemas, hemorrhage, anaemia, thrombus and embolus.

Henry P. Loomis (American System of Practical Medicine, Vol. 2, page 744)

has well expressed the brain symptoms which develop during the course of chronic interstitial nephritis.

His classification is as follows:

(1) Disturbance of motor center: uremic convulsions, epileptic convulsions, tremors, localized contraction of muscles, especially those of neck and face.

(2) Disturbance of physical center: delirium, hallucinations, vertigo, coma, melancholia.

(3) Sensory center: deafness, blindness, and hemiopia.

(4) Center of respiration: dyspnea, Cheyne-Stokes respiration, laryngeal spasms.

(5) Center for heat regulations: hypo- and hypothermia.

It will thus be seen that the symptoms are somewhat diversified, and are dependent—as stated above—upon the seat of the pathological lesion.

Variation in the syndrome of the cerebral seizures—if I may so call them—is interesting and suggestive. Thus we may have localized cerebral symptoms; such as paraphasias and other speech difficulties, localized sensory disturbances, particularly the acro-paesthesias and more commonly headache, vertigo, and other general brain symptoms; and as an aid to the prognosis, it is well to state here that such symptoms are often transitory and yield quite readily to symptomatic treatment.

As demonstrating this condition, I would refer to two cases recently under my care. In one case, a Broca aphasia was unassociated with other nervous symptoms. The other patient showed a well marked right hemiplegia. Both individuals recovered from their respective symptoms when placed under milk diet treatment. It is also noteworthy to state that in these cases, renal disease was not

suspected prior to the onset of the brain symptoms.

The uremic symptoms are, of course, paramount; but it should be remembered that uremia is not always the cause of these cerebral symptoms. The generalized vascular fibrosis which accompanies the forms of chronic nephritis is an etiological factor in the production of hemorrhage and thrombotic deposits. Unquestionably many of the isolated cerebral symptoms which are observed in the "granular kidney" are due to such lesions. In this connection it is well to mention that a sub-pial oedema of inflammatory nature not uncommonly occurs, and may be more or less diffuse.

Persistent headache and neurasthenic symptoms are often primary symptoms, and are frequently seen in the first stages of the disease. As is well known, cerebral hemorrhage occurs with a fair degree of frequency. The fact that this may be dependent on the secondary cirrhotic arterial change of chronic kidney disease is often forgotten.

When estimating the importance of any cerebral symptom of renal derangement, it should be remembered that chronic Bright's disease is attended with general somatic changes. Any localized symptom or syndrome is dependent on (1) the accumulation of toxic products in the blood and their consequent action on nerve tissues; (2) changes in the walls of the blood vessels, permitting a serous exudation which may be more or less diffused; or (3) the changes in the vessel walls may be so pronounced that there may be a rupture of the coats, producing a hemorrhage, or a formation of a thrombus. Localized cerebral symptoms are indicative of cedema, thrombosis, or hemorrhage; or on the other hand generalized symptoms;

such as coma, delirium, convulsions, and the psychoses which are dependent on uremia, or some other form of toxæmia.

In the light of recent knowledge, we must not regard the term "uremia" as explanatory of all the nervous symptoms of kidney disease. It is a convenient term, but no doubt often incorrectly used. An examination of the urine of suspected cases of "uremia" will not uncommonly show that, not only is there a normal percentage of urea, but that there is no well marked change in the toxicity of the urine. We are thus forced to consider the symptoms as directly dependent upon the fibroid arterial changes.

Although the cerebral symptoms of kidney disease occur as a rule after the disease is advanced, they may be the first objective signs; that is, symptoms which lead to an investigation for disorderly kidney function.

In conclusion I would offer the following summary:

(1) The cerebral symptoms of Bright's disease are dependent upon a lesion, which may be localized or diffused.

(2) The syndrome quite often shows variation in intensity of symptoms, and their sudden appearance or disappearance is characteristic.

(3) While the brain symptoms are generally terminal or appear late in the disease, a development of general or isolated symptoms is not infrequently seen in the early stages of kidney degeneration.

(4) Persistent headache and a neurasthenoid state are suggestive of disordered kidney function.

(5) The generalized cerebral symptoms, such as headache, general convulsions, and disturbance of the sensory, motor, and psychical centers are more commonly dependent upon toxæmia.

(6) The localized cerebral symptoms are generally related to the vascular change; being the expression of the cirrhotic arterial change which accompanies the kidney degeneration.

(7) Uremia is a term often loosely applied to account for many obscure nervous symptoms. Its use should be restricted to these cases, where the condition can be determined by thorough urinalysis.

TREATMENT OF DISEASES OF THE KIDNEYS.

JOSEPH B. WHINERY,
Grand Rapids.

If I understand the scope of the subject under discussion, we are dealing with nephritis in its acute and chronic forms and the remarks made with reference to treatment will apply to these diseased conditions only. In discussing the treatment of so common a disease as nephritis, I can merely review in a brief manner points which are generally recognized by the profession.

In the treatment of acute nephritis, irrespective of the cause, the patient should be guarded against exposure; he should be clothed in flannel garments and kept in a bed provided with blankets. The diet should be bland—at first milk given in small amounts well diluted with lime water or some mineral water. The milk should be gradually increased until one or two quarts are taken a day, and gruels should gradually be added. On account of the engorgement of the vessels of the kidneys, a liberal amount of water should be given at stated intervals. In addition I have found the well known drink of a dram of cream of tartar in a pint of lemon juice a useful one.

As a rule, very little medicine is needed to control the fever. Liquor of ammonium acetate usually being sufficient. Elimination by the skin and bowels is indicated. Hot drinks, such as lemonade, or the use of a hot-water or hot-air bath, followed by wrapping the patient in a blanket, will usually cause free diaphoresis. When these means fail and there are symptoms of uraemia or marked oedema, pilocarpine may be given hyperdermatically in doses of $1/10$ to $1/6$ of a grain. One must bear in mind two points in regard to the use of this drug; one is that it is a heart depressant and if necessary strychnine should be used with it; and the other is that it causes a free secretion into the bronchial tubes and in oedema of the lungs the result may be disastrous. The salines are the best purgatives to use as they do not irritate the kidneys. Epsom or Rochelle salts are usually efficacious. Compound Jalap powder is also a safe and efficient hydrogogue cathartic. A most powerful aid in stimulating the action of the skin and kidneys is the use of a normal salt solution, given either subcutaneously or injected well into the rectum. Punctures in the skin or the use of Southey's tubes are measures indicated only in cases of marked oedema not relieved by the means already mentioned.

Pericardial and pleuritic effusions increase the danger of renal dropsy and aspiration is sometimes imperative. For the relief of pain, suppression and haematuria, counter-irritation to the back by cupping or the Paquelin cautery or the use of hot applications are the methods commonly employed. Convulsions depending upon uraemia are to be treated by active elimination. Saline solution and hot packs are indicated. Chloroform may be used to control the convulsive seizures. In suitable cases, bleeding to

the extent of one or two pints is of aid. For obtaining quick and active purgation, elaterium or croton oil may be resorted to.

After the kidneys have started to secrete freely, farinacious food may be gradually added, followed by the return to simple vegetables and mild fruits. It is best to withhold eggs, meat and alcoholic stimulants until the urine is free from albumen.

We have no reliable remedy for a persistent albuminuria. Anaemia is usually present and during convalescence a bitter tonic and iron is indicated. It has been my custom to use Basham's mixture at this time. The general improvement in the condition of the patient, especially in that of the blood, may exert a favorable influence over the albuminuria. Patients who have been through an attack of acute nephritis should be cautioned about their eating and warned about sudden changes of temperature. The urine should be examined at intervals for at least a year following the attack. Subacute attacks of nephritis occurring in the course of a chronic trouble should be treated along the lines already laid down.

Chronic Bright's disease is classified under two general heads, chronic parenchymatous nephritis and chronic interstitial nephritis. The first form usually, but not invariably, follows an attack of acute nephritis. In parenchymatous nephritis, care should be taken in regard to the diet, but it is hardly practicable to limit the patient to milk. It is quite generally believed that a moderate amount of good wholesome food is necessary. The skin and bowels should be kept in an active condition. As the urine is usually diminished in quantity and the amount of solids excreted also diminished, attention should be paid to this. Water in liberal amounts should be taken and in condi-

tions calling for a more active diuresis the cardio-vascular diuretics are perhaps the most useful. It sometimes happens that when you most need the action of a diuretic in chronic Bright's disease it fails. The infusion of digitalis itself or combined with acetate of potash is usually effective and diuretin has within recent years gained considerable prominence. In this form of nephritis with anaemia, iron is well tolerated. Complications which arise in the course of the disease are to be treated as in a case of acute nephritis.

In chronic interstitial nephritis, coming on as it usually does in a slow and insidious manner, the treatment is more hygienic and dietetic than medicinal, the fewer drugs the better. The disease usually manifests itself about middle life or later, but it is sometimes present in young people and even in children. In families with an hereditary history of the disease or with a tendency toward an early degeneration of the arteries, there should be such regulation of habits of living as to subject the kidneys and circulatory apparatus to a minimum amount of work. This is a disease in which preventive measures play a most important part. Too much work thrown upon the kidneys is at the bottom of the trouble.

When we consider that most of us eat 30 or 40 per cent. more than we need and that the kidneys are called upon for an excessive amount of functional activity, we can readily understand that such changes may take place as will result in interstitial nephritis. A large amount of nitrogenous food with accompanying sedentary habits tends to the establishment of this disease. Overwork, worry and mental strain are causative factors. Alcohol, syphilis and a few other toxic elements may be considered responsible for chronic Bright's. As a prophylactic

measure in suspected cases it is best to cut down the quantity of the proteids. Butcher's meat should be sparingly used and limited to one meal a day. Fish and poultry are allowable as affording a change in diet. Peas and beans are best left alone. Sugars and starches should be restricted, especially when there is a tendency to obesity. Alcohol and tobacco should be interdicted. Exercise proportionate to the individual case should be prescribed; it is harmful for such cases to take exercise of so violent a nature as to produce fatigue.

The ability to adjust habits to the changes of advancing years, as the regulation of diet, exercise, fresh air and outdoor life, are the keynotes in the prophylaxis.

No doubt there is an early stage of the disease in which it is difficult to make a diagnosis, but I think it quite frequently happens that the physician does not recognize the trouble when decided symptoms are present. Careful examination of the urine and a proper appreciation in the changes of the heart and blood vessels will lead to earlier diagnosis. There has been a tendency to rely too much upon the examination of a single sample of urine, too little importance being attached to the small amount of albumen usually present. We should remember that there is no relation between the amount of albumen present in the urine and the extent of the kidney involvement. In suspected cases make repeated examinations of the 24 hours' sample of urine. An increased quantity of a low specific gravity, containing a small amount of albumen, casts few in number and a deficiency in solids are the most important points to be noted in making a diagnosis. This condition of the urine is almost invariably accompanied by an increased arterial tension,

with or without noticeable thickening of the arteries, hypertrophy of the left side of the heart and an accentuated aortic second sound.

If the disease is not diagnosed until after it is well established, the general rules referred to under prophylaxis are to be observed. Although it may be possible to restrict the use of proteid food, it is hardly practicable to cut down to milk alone. When we consider that people affected with chronic Bright's often live for years after the disease is discovered, we see that an adherence to a starvation diet of milk would become rather monotonous. Fats, vegetables, fruits and cereals allow a fairly wide range of diet. Woolen underclothing should be worn the whole year. In regard to the influence of climate it is said that there should be as little cold, moisture and variation in the temperature as possible; that a hot, dry climate is better than a cold, dry climate. The states in our country most unfavorable for patients suffering from kidney disease are New Jersey, New York, Massachusetts, New Hampshire, and Vermont, and the most favorable are Tennessee, Georgia, Nebraska, North Carolina, Arkansas, Texas and certain parts of southern California. The condition of the heart naturally influences the selection of a climate for those seeking relief from kidney trouble. In many cases symptoms arising from the vascular system gives us most concern. In the treatment of Bright's disease we should not regard it as purely a renal trouble and lose sight of other important organs. The state of the kidneys is often the last thing to attract the patient's attention. Many people die from cerebral hemorrhage, cardiac trouble or some other complication arising from chronic nephritis without the correct diagnosis being made. Aside from the

polyuria, coming on as it does in a gradual manner, there is little if anything to direct his attention to his kidneys.

The medicinal treatment should be restricted to the indications as they arise; we have no remedy which will influence interstitial changes in the kidney although potassium iodide and mercury given in small doses over a long period of time are reported to act in a curative manner. With a tense pulse, cardiac hypertrophy, vertigo and headache, iodide of potassium or nitroglycerin will give good results. Under a strict non-nitrogenous diet with free catharsis, cardiac hypertrophy will often be diminished (Purdy). As long as the vascular tone is good the heart does its work and there is little trouble, although the kidneys may be badly damaged. When the heart begins to fail on account of degenerative muscle changes, dilation occurs, the valves begin to leak and tension is reduced. Under these conditions digitalis and strychnine are the drugs to be relied upon. Rest in bed should be strictly enforced. The gradual introduction of cardiac gymnastics according to Schott and the Nauheim baths are beneficial in restoring to some extent the tone of the heart.

Gastro-intestinal, nervous manifestations and other complications are to be treated in the simplest way possible.

Within the last three or four years surgery has been resorted to in the treatment of chronic Bright's. To Dr. Edebohls belongs the credit of being the first to employ surgical means for the relief of sufferers from chronic interstitial nephritis. The results obtained in a series of cases from peeling off the capsule and puncturing the kidney have been encouraging, and apparent cures have resulted.

DISCUSSION.

GEORGE DOCK, ANN ARBOR.

I think when Dr. Clark says that he finds functional albuminuria more common than organic albuminuria he opens the way for a certain amount of error. It seems to me that the profession has wisely withdrawn from the early position of Ralfe and others, according to whom many cases of albuminuria were to be called functional. If by functional we mean that the disease is not going to cause permanent damage to the kidney, of course that is quite proper. In the same way we might say that bronchitis was a functional disease because the lung is not permanently damaged, and yet a man may have severe and even dangerous disease in his bronchial mucous membrane; so may a patient have a severe disease in his kidneys without causing fatal or even permanent severe disease in those organs. But at the time that such an albuminuria occurs I think it is rarely safe to say that the patient merely has a functional and ergo harmless albuminuria. I do not think Dr. Clark meant that, but the reiteration of the old statement of Ralfe is certainly calculated to tend to that opinion.

It is certain that many cases occur in which we find not only albumen, but also casts, in which there is very little damage to the kidney. Dr. Clark has mentioned cases following exercise. Those are the most striking cases one can see. In a man, especially one not a regular athlete, but a man who suddenly undertakes unusual exercise, for example, the untrained man taking a long, hard bicycle ride, we can get sometimes a good deal of albumen and sometimes the most beautiful casts, and many of them, that we ever see, and yet those patients (and some of them I have followed for a number of years) never have a serious kidney symptom. On the other hand, we see the same sort of symptoms, namely albuminuria and casts, in varying quantity, in patients with certain diseases, especially of the toxic kind such as Dr. Clark mentioned—cases of typhoid, of pneumonia and erysipelas, and, in fact, one might say any of the acute infections.

Now I think it is a great mistake if we speak of the changes in these cases as cases of nephritis, and I try very hard in my teaching and practice to avoid that. It seems to me rather unfortunate that writers have not followed the hint given many years ago by Weigert, and followed ever since then by Ziegler in his text book, according to which we should speak of these not as cases of inflammation of the kidney, but as cases of degeneration of the kidney. There are cases very

often merely of degeneration of the kidney epithelium, in which the albuminuria and casts are very striking, especially the casts, not so much the albuminuria usually, and yet usually the patients recover from those conditions; one can see them after very trifling fever, sometimes the acute anomalous fevers that last only two or three days, sometimes very strikingly in pneumonia and typhoid fever. And yet I think that in the acute stages we are not always able to say whether these conditions really are mild; we usually find that they are mild and yet it seems to me that we make a great mistake in those cases if we do not daily examine the urine microscopically and chemically, and if we do not also have the urine measured so as to give an accurate idea of the total quantity excreted, and one may even go further and examine for urea, solids, etc., for in some of these cases one can find uremia developing very suddenly, and in some other cases we find secondary changes coming on after a long period. It rarely happens that uremia comes on in typhoid fever as a result of the kidney alteration, and yet it sometimes does and a patient may go into a dangerous or even fatal condition before one expects it, if the urine has not been examined. Such a patient may have urine very much like the urine we get in scarlet fever. After typhoid it does not so often happen that we get late changes in the kidney following such infections or intoxication; in scarlet fever we more frequently get it. How often we see cases developing symptoms of chronic interstitial nephritis, between 20 and 30 years of age, where there is no history at all that can account for it except the history of scarlet fever in early life. So that in either of those events, whether from a mild infection, for example from typhoid, pneumonia, or after scarlet fever, I think it is useful to advise the patient to have his urine carefully examined at least once a year, better twice a year, and to have a careful examination made of the whole quantity for twenty-four hours, or if there are reasons for expecting a severe change in the kidney, to have a number of tests made through several days at such periods.

It seems to me important to remember, and it is rather difficult to do so, how variable the changes are in different parts of a single kidney and how the different parts may be impossible of distinction by the ordinary clinical signs. I was glad that Dr. Clark laid stress on the necessity of a complete examination of all patients suspected of kidney disease. Nothing would be more untimely now than to base one's diagnosis of a kidney disease merely on an examination of the urine, no matter how complete or how careful,

using the most complicated methods. The examination of the whole patient, especially of his circulatory organs, of his serous membranes, of his stomach, of his eyes, of his brain, in various ways, all these are extremely important, and, in fact, essential. It is only by such careful examinations that one can hit at all on a safe prognosis in certain cases in which the urine is not at all a safe guide. Perhaps a brief allusion to a couple of cases that have come under my observation lately may make my idea clearer. I have in mind a man beyond middle age, who, to my knowledge, for four years has constantly had, whenever I have examined his urine, a number of times a year, a considerable quantity of albumen, that is, about one-fourth on standing, after boiling and adding nitric acid sometimes as much as a half, who always has large numbers of casts of all kinds, largely hyaline, with or without granules, and always with a few casts containing epithelial cells and sometimes leukocytes, sometimes blood; this patient, however, has no other symptoms at all, he is able to do a great deal of work, he only has exacerbations as a result of overwork, especially combined with slight excess, perhaps, in the use of alcoholic drinks; and yet only the day before I left home I had a letter in regard to a patient who has an exactly similar urine, who has been under my observation only a few months, and who has changes in his eye ground, in contrast to the other patient who had no eye changes, such as Dr. Parker has described. In this case I made a bad prognosis, based on the existence of albuminuric retinitis, for my experience in such case is that it usually ends within a year after the changes in the retina are found, frequently within six months, and yet in this case, after sending the patient south for the winter, I heard only the day before I left home that he was apparently in a hopeless condition. [He died a few days after the meeting.]

In another case, where the urine was so much like the one I first mentioned that as I examined them one time on the same day, it was impossible to tell under the microscope which was which—the patient had heart symptoms, along with his urinary symptoms, and his general condition was distinctly caeectic; he had among other things an old sinus which occasionally suppurated, and the question was asked whether it was safe to treat this radically, and especially whether it was safe to treat it with strong antiseptics. I advised the patient and his physician to treat the case as mildly as possible, and counseled especially against salicylic acid, which had been used as an internal antiseptic; however, the patient was put on large doses of salicylate of sodium for the purpose of

quickly healing up the sinus, and whether as a result of that, or as merely a coincidence—at any rate it struck me as being rather instructive—the patient died very quickly.

In regard to the methods of testing for albumen, I would like merely to reiterate Dr. Clark's statement that practice in the use of a safe method is the best thing. There are hundreds of methods, many of them are good, a great many of them are not very good, but given a fairly good method, the most important thing is to have practice in the use of that method. And I know of nothing more instructive than to take a couple of hours to the testing of a specimen of albuminous urine, and especially by making various dilutions. As regards the overlying tests, the instrument that Dr. Clark has shown is no doubt very useful. I would like to point out, however, that a simple, ordinary straight glass tube is just about as good, in my opinion. One simply gets a few drops of urine in the tube in the ordinary method, then after carefully washing off the outside of the tube, so as not to contaminate the nitric acid, allowing the nitric acid to run up by having the nitric acid bottle rather full, and in that way getting a small column, a narrow column and one that shows the difference very well. With practice one can recognize the different kinds of rings very accurately. And in addition to the matter of heating the tube for the detection of urates, I would like to add that microscopical examination, by simply dropping out the ring on the slide, is very often also of a good deal of assistance, especially in distinguishing between the alkaloidal precipitates and urea, or uric acid.

In regard to the treatment of kidney disease, Dr. Whinery's summary was extremely sensible and full. The chief thing is to treat the patient; there is no treatment, of course, for any of the forms of kidney disease, the thing to treat is the individual, and how to treat him you can only tell after examining thoroughly all the features of the case. I would like to protest, however, against the idea that Edebohls or anybody else who advises operations for the cure of kidney disease has yet proved his point. It seems to me if you will read Edebohls' article carefully you will have a good deal of difficulty in convincing yourselves that the diagnoses were always right, and how anybody can be sure that he has cured a kidney disease within a few months after finding the patient recovering from an operation, is something I have not been able to discover from anything I can find out clinically or anatomically about alterations of the kidney. That slitting the capsule may improve the circulation in the kidney, I do not at all doubt, and I might be willing to

recommend such an operation, although I have not found the patient in whom I thought it was necessary; but that one can predict that such cases can be cured, it seems to me we are by no means able to say. And it seems to me rather interesting to observe that this new discovery in surgery is coming on just at a time when a conservative wave is striking the surgeons in regard to many other border line cases; they are operating on fewer appendicitis cases than they were a few years ago, and apparently a new field opens itself up in the way of the kidney disease. I would suggest that we go rather slowly in recommending our patients to leave our medical care and take up surgical care for the correction of those kidney diseases.

J. H. REED, BATTLE CREEK.

I am in perfect accord with the principal points made by all three of those gentlemen in regard to the peculiar complications as well as the treatment of kidney diseases. Yet in looking at our program, I find that the Symposium is on the diseases of the kidneys, and in hearing the papers that I have to-day I find that everything is devoted altogether to nephritis or Bright's disease. Those among you who know me know that I have devoted a great deal of attention to the treatment of diabetes, but though diabetes has not been touched upon, I have come prepared to give a little dissertation upon that subject. However, I wish to accentuate as much as I can what has been said by Prof. Dock. He has made one very important point, and that is this, that it is utterly impossible to treat any case of kidney disease by a stereotyped rule; you have got to treat the patient himself according to the physiological conditions. In addition to that I think it was Dr. Neff who spoke of one of the peculiar conditions in nephritis as cardiac hypertrophy. In my experience in the treatment of both diseases, diabetes and Bright's disease, I find that there are two conditions which are almost universally found: one is neurasthenia and the other cardiac hypertrophy; in almost every other condition of both of those diseases they are almost directly opposite.

Dr. Neff also, I think, made the statement that convulsions generally always followed a state of coma in nephritis. That has not been my observation; I always find that coma follows the convulsion, not convulsion the coma.

In addition to this I want to lay stress upon what Prof. Dock has said, as well as what Dr. Neff has said, in regard to urine analysis. Too much attention cannot be paid to making correct urine analysis. I not only subject my patients to

a very careful physical examination, but I have the urine from every micturition; if I have ten, fifteen, or twenty micturitions in the course of twenty-four hours, I examine every one of them, and I not only examine them physically, chemically, microscopically and morphologically, but I try as near as I can to find out just exactly what is the condition and treat them accordingly, and in that way have had some considerable success. I have just recently read a paper before the association in Saratoga, in which I laid down my line of treatment and showed how I have somewhat either progressed or migrated, as you might term it, from the usual line of treatment, which I have heretofore followed and which Prof. Dock has heard me speak of before the Kalamazoo Academy of Medicine a year and a half or two years ago.

I now find in the treatment of diabetes that the liver is more involved, or as much involved, as the kidney, and I treat accordingly.

Another point made by Dr. Neff was that he spoke of transitory albuminuria. That is a case that I have never yet found. I find transitory glycosuria or I find cyclic albuminuria. The distinction and differentiation, according to my standpoint, consists in this, in diabetes we may find a transitory glycosuria, where we have sugar to-day, and may not have to-morrow, and the second or third day, and then the fourth or fifth day it may return, and in albuminuria we may have the presence of albumen in the morning, and it may be entirely absent at noon, and may be present in the afternoon, and here it is that the term cyclic albuminuria is applied in such cases.

The treatment in regard to these cases is as Prof. Dock has said, and as Dr. Neff has said; it consists not only in great care as to clothing and exercise, but a strict diet, as little medicine given as possible, but where medicine is indicated there is nothing in the world to take its place. Dr. Neff spoke of the different alkalines which he used to loosen the bowels, but did not mention one which I have very frequently used, phosphate of sodium, from which I have received very much more pleasure and comfort in the treatment of my cases than almost anything else. Sometimes, however, where there is a very decided hepatic condition, I use the old hepatic pills of aloin, belladonna, strychnine and ipecac in combination.

V. C. VAUGHAN, ANN ARBOR.

Chronic nephritis may be induced in animals in the experimental laboratory by administering gradually increased doses of chromate of potash, and it has been found that the blood serum of

animals thus treated is poisonous to other animals. This suggests that the chromate of potash disintegrates the kidney cells and that poisons are formed in this way. We may possibly find the true factors of uremia by following along lines suggested by these experiments.

H. M. KING, GRAND RAPIDS.

I should like to call attention to one clinical manifestation of arterial capillary fibrosis, as it appears in a chronic nephritis, which has not been touched upon to-day. It may not, however, have any very great importance. It has occurred in my practice two or three times, among public speakers and singers, and in one case in an actor, all of them having lived rather strenuous lives, using their voices of course as a daily occupation. In all cases the first symptom of which they complained was due to an œdematous laryngitis, very mild, and which was attributed to an acute cold, which had been allowed to go on unattended for quite a long time. In all of these cases there was cardiac hypertrophy, without, however, any œdematous condition otherwise in the body than this in the larynx. One of these cases, after my diagnosis, succeeded in passing an examination for life insurance in one of the large eastern companies, and in the examination was subjected to an urinalysis of a twenty-four hour specimen. I merely mention this to show that in one case at least there were no urinary manifestations which were noticed on the examination, although there was at the time of my examination a polyuria. The other two cases presented marked urinary symptoms, and of course could have been diagnosed long before they were, but the attention of the patient had not been called to the condition except through the laryngeal symptoms.

MORTIMER WILLSON, PORT HURON.

I would like to ask Dr. Vaughan for information as to how he determines that the toxic material in this rabbit's blood is from the breaking down of the kidney cell, or from the lack of elimination.

Dr. Vaughan: The cells are broken down; of course we see that with the microscope. And then the determination of the urea, uric acid, etc., in the blood serum shows that there is no large accumulation, no more than is normal.

Dr. Willson: It is known, of course, that urea alone does not cause what are generally known as uræmic symptoms.

Dr. Vaughan: Yes, that is true, that is known.

Dr. Willson: The question in my mind was, how to determine whether this was the product

of the broken down renal cells, or whether it was lack of elimination of some poison unknown.

Dr. Vaughan: We have tried to do this and stopped elimination, and we didn't get this result. This would be the answer to that question.

Dr. Wilson: There is another point I wish to speak on a moment. I think it is a good thing in medicine to be an optimist, and I do not feel in regard to Dr. Edebohls' experiments, as you might call them, surgically, in these cases as one of the speakers does. Certainly quite a remarkable series of cases with very remarkable results is reported, and for myself, from what I know of the gentleman, I should be fairly convinced that he is capable of making a diagnosis, and so I think that I would not close the door of hope in that direction. We know how hopeless medicine and hygiene sometimes are in these cases; in fact, in most of them when they reach a certain stage, and I think it well worth while to keep this other avenue in view.

JOHN E. CLARK, DETROIT.

Dr. Dock's distinction between functional and organic affections of the kidney is to me very satisfactory. It has long been a matter of doubt in the mind of the profession as to whether there can be such a thing as "functional albuminuria." By this I understand a perverted function resulting in albuminuria, the condition not characterized by any change in structure; perhaps the majority of writers insist that there cannot be an exhibition of albumen in the urine without some change in structure, be it permanent or but temporary; while others contend our every-day experience goes to demonstrate that organic change does not occur on every exhibition of albumen in the urine.

Some time ago a theory was advanced by Ludwig which explains the establishment of the name, "functional albuminuria." The theory encourages such terms as "functional albuminuria," in that it accounts for albumen in the urine by pressure, which forces it through the membrane. This in brief is Ludwig's theory, and I believe there is still a certain amount of truth in that theory, although it has been shown conclusively that this in itself is not sufficient to account for what we call or what is called by a great many writers, "functional albuminuria."

In regard to the new treatment for interstitial and parenchymatous nephritis, the so-called Edebohls treatment, this is something that has been known for a good many years. I believe the first man who introduced this puncture in the United States, some few years ago, was Edward Ander-

son; previous to that, Israel of Berlin had operated on a number of cases of nephroplexy, and had found that this operation, which was not conducted for the purpose of treating parenchymatous or interstitial nephritis (puncture of the kidney membrane) did result in the removal of albumen from the urine and also the disappearance of casts. But I agree most emphatically with Dr. Dock that the use of the operation at present is something that should be attempted with a great deal of caution; the point is simply that the diagnosis of interstitial nephritis or even the large kidney is in a great many cases almost impossible. Some of you may remember a celebrated paper, or a very able paper, read at the Pan-American congress, in which the writer, I forget his name now, drew attention to the fact that you may have casts, you may have albuminuria, you may have vertigo, you may have uremia, you may have cardiac complications, and although you may have nearly all the symptoms, you do not have, as you would assume, a pathologic kidney. It has been shown time and time again in the autopsies following deaths from supposed kidney disease, that the kidneys were intact and that a mistake in the diagnosis had been made. This new operation should be most carefully looked into by the practitioner before he recommends his patient into the hands of a surgeon for this treatment, and satisfactory results in operations made for *chronic nephritis* must be obtained in many instances before it receives the endorsement of the practitioner at large.

HILLSDALE COUNTY MEDICAL SOCIETY.

THE JOURNAL is pleased to report a most satisfactory and successful meeting of the physicians of Hillsdale County, held at Hillsdale on August 27th. Through the active efforts of Dr. Bulson, president of the State Society, Dr. Haughey, secretary of the Council, Dr. Hafford, Dr. Whelan, and Dr. Sawyer, and with the hearty co-operation of the medical men of the county, the Hillsdale County Medical Society was organized. Dr. Whelan was elected president; a constitution and by-laws in conformity with the state organization, were adopted. Application was at once made to the State Society for a charter, and the charter has been granted.

The Journal of the Michigan State Medical Society

PUBLISHED MONTHLY

A. P. BIDDLE, M. D., Detroit.....Editor | S. EDWARD SANDERSON, M.D., Detroit, Bus. Mgr.

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Application Made at the Postoffice, Detroit, Mich., for Entry as Second-class Matter.

DETROIT, SEPTEMBER, 1902

THE PORT HURON MEETING.

The last annual meeting of the Society marks a period of progress in its history. For years leading members of the profession have seen the necessity and advantages of organization, that so large a body as the medical profession might wield the influence its interests demand. It is, however, only within the last two years that the American Medical Association has been able to adopt and to urge upon other societies practical methods. It is not necessary here to enumerate the means it has adopted to govern its own body; but for the benefit of those who were not at the meeting at Port Huron it may be well to state that the National Association submitted to the State Asso-

ciations a common plan of organization, which in substance urged the formation of the county societies, and placed the management of the affairs of the State Society in the hands of delegates elected pro rata by the county societies. Early during his presidential term, Dr. Connor appointed a committee on reorganization, consisting of Drs. A. E. Bulson, George Dock, and Charles T. McClintock, to consider the subject, and these members, after making changes to conform to our needs, submitted the proposed constitution and by-laws for the consideration of the Society. The spirit of organization was, however, already abroad and in this spirit, animated by the able address of the President and fascinated by the genial presence of that gentleman of Kentucky,

Dr. J. N. McCormack, of Bowling Green, the chairman of the committee on organization of the American Medical Association, it unanimously adopted the constitution and by-laws; wisely, however, continuing its committee on reorganization and instructing it to revise the same, its revisions to have the force of immediate effect. Realizing that this work has just begun, the Society elected as its President the chairman of the committee, Dr. A. E. Bulson, of Jackson.

And from every other point the meeting was a success. The papers, discussions and general interest compare favorably with other years and never has there been recorded a greater attendance.

Detroit was chosen as the next place of meeting, and the date has been fixed at June 11 and 12, 1903.

THE JOURNAL.

It is not necessary to enumerate the many advantages of a monthly journal over the annual transactions for a place of record of the doings of the Society. One of the principal ones, however, will be the opportunity it affords to the officers of the Society to come into more intimate and frequent touch with the members, and to the members to present their views, for we wish it understood that we invite to its columns all honestly expressed criticisms. THE JOURNAL is the official organ of the State and County Societies, and we expect soon to have it the record place for the proceedings of the component societies. We invite correspondence on any matter of common interest.

The annual dues cover the subscription to THE JOURNAL.

We enter the field of journalism simply as a better ground to plant the seeds of

common interests and to reap the benefit of closer acquaintance. We enter with no feeling of rivalry nor competition, and to those journals already here, which have in the past graciously recorded the doings of the Society, we express our sincere wishes for their continued success.

THE REVISION OF THE CONSTITUTION AND BY-LAWS.

Well realizing that, while the constitution and by-laws adopted at the Port Huron meeting formed a good working basis and offered encouragement to the officers of the Society to continue their work for the organization of the medical profession of the State, they must contain many features which might be improved upon, the Society wisely empowered the committee on reorganization to revise the same as it deemed best, such revisions to form part of the constitution and by-laws and to have immediate effect. Many changes have been made, the ones to meet probably with popular approval being the reduction of the annual dues to \$2.00, payable through the county society, and the election of the president by the society as a whole. Other changes are made to insure a better business management of its affairs. The finances and the conduct of THE JOURNAL are placed in the hands of the Council, practically a permanent body. Being responsible for their work, the selection of the secretary and the treasurer is also placed in its hands.

THE COUNCIL.

By the new order of things, the Society entrusts the work of organization throughout the State in the hands of twelve councilors, one from each Congres-

sional District. These members, carefully selected by a special committee, have entered upon their work with an enthusiasm and an earnestness which promise well for the success of their labors. On July 10th the Council met with the other officers of the Society in Detroit, organized and outlined the work of the year. It elected as its chairman the retiring president, Dr. Leartus Connor, to whom more than to any one else belongs the credit of putting into working force the new order of things; and as its secretary, Dr. W. H. Haughey, of Battle Creek, another enthusiastic, indefatigable worker.

Two councilors are elected every year to serve for six years. To these men is given all power and to them will be the credit of success. To the individual councilor is given the supervision of his own district, and to him must the County Society apply for instruction. That the Society may have the benefit of the work and the counsel of all its officers, the vice-presidents will aid the councilors in their duties.

THE COUNTY SOCIETIES.

The primary object of the organization of the medical profession of the United States is to get every practitioner of medicine in good standing interested in medical matters. It is believed that the best way to do this is to go into every county and to organize there a society which must be within reaching distance of every practitioner, and so the county society becomes the center of interest, and as rapidly as it can be done one will be organized in every county where there are a sufficient number of physicians.

A county society, when chartered, becomes a component part of the State So-

ciety and is directly interested in the State and every other county society.

The primary steps for the formation of these societies have already been made.

On August 8th Calhoun County was granted a charter, the first to be issued by the State Society.

As but one county society can be chartered in each county, the physicians of Wayne County met in Detroit on July 25th, under a call of a joint meeting of the Detroit Medical Society and the Wayne County Medical Society. Here the members of the societies listened to the remarks of the President of the State Society, Dr. Bulson, and to an able address on organization by Dr. P. Maxwell Foshay, of Cleveland, a member of the committee on organization of the American Medical Association. After some other remarks the Detroit Medical Society graciously yielded to the Wayne County Medical Society. The latter has already taken into its membership all the members in good standing of the Detroit Medical Society, has amended its constitution and by-laws to meet the requirements of its new relationship to the State Society, and has been granted a charter. Wayne County presents to the State Society a united profession. May the other counties quickly do likewise!

Many county societies have been in affiliation with the State Society for a number of years. In most of these the annual meeting will take place during the month of September or October, a meeting which is usually well attended. It is urged upon the officers of these societies to make a special effort to secure as large an attendance as possible, to explain to the members the plan of organization, and to amend their constitution and by-laws to meet the requirements of the State Society. These

requirements in no way interfere with the fundamental principles of organization, but simply bring the county society into closer relationship with the State and facilitate the transaction of business. That the county societies may adopt a uniform plan, the committee on organization of the American Medical Association submitted a constitution and by-laws for their consideration. (See *Journal of the A. M. A.*, August 9, 1902, page 315.)

MEMBERSHIP.

It is now probably well understood that membership in his county society entitles one to membership in his State Society and in the American Medical Association, and that no one can be a member of the National Association unless he be a member of his State Society, or a member of the latter unless he be a member of his county society. It is, therefore, sincerely urged upon every member to extend every aid to the councilor of his district in the formation of the county societies.

The annual dues of the State and County Societies are paid to the County Society, and to the latter the State Society looks for its assessment.

THE PRESIDENT'S ADDRESS.

Dr. Connor's address, which will appear in the first two issues of *THE JOURNAL*, is well worth the careful perusal of every physician in Michigan. Its consideration of the early history of the medical profession of the State is interesting and instructive. Its clear exponent of the needs of the Society paved the way for the adoption of the constitution and by-laws at the Port Huron meeting.

Communications

Battle Creek, Mich., Aug. 25, 1902.

The Editor:—

Permit me through the columns of *THE JOURNAL* to call attention of the profession to a means by which the members can materially aid the work of organization.

If every doctor in Michigan, in the counties in which organizations do not already exist, will constitute himself into a committee of one to organize a society in his county and to correspond with the Councilor of his District, who is in a position to give him valuable instructions, it will materially aid the Councilor in his work. Each Councilor District embraces several counties and it is manifestly impossible for the Councilor to visit each individual doctor of the District; but, if the doctors will correspond with the Councilors and acquaint them with the local needs and conditions, the Councilors can act intelligently and expeditiously.

When meetings are called to which Councilors are invited, it is *the plain duty of all medical men* nearby to attend the meeting. Lend aid by your presence. Encourage your Councilor that much.

Let us organize and occupy the honorable position in the minds of men that our professional attainments entitle us to. This can be best and most quickly accomplished by corresponding with *your Councilor* and with *each other*, calling meetings and organizing. Let us all work together.

I have sent out the following circular to the members of my District, which I submit as a suggestion to the other Councilors:

"As you are aware, the Michigan State Medical Society at its recent meeting at Port Huron adopted a plan of reorganization along lines mapped out by the American Medical Association, and elected a Board of Councilors to carry on the work.

"At a subsequent meeting of the Board of Councilors, held in Detroit, July 10th last, it was decided that membership in the county society carries with it membership in the State Society, the dues for which are \$2.00 per year in addition to dues to the county society, and secures for its members *THE JOURNAL* of the Michigan State Medical Society, issued monthly, also eligibility to membership in the American Medical Association. State dues to be paid to the Secretary of the County Society.

"To more thoroughly explain the above-named plan in all its features, the Councilor for your District, the President and Secretary of the State Society, together with several other prominent members of the profession in Michigan, will be at the courthouse in..... at 1:30 P. M..... 1902, when they hope to meet all the eligible medical gentlemen of..... County with a view of establishing, or reorganizing if already established, a County Medical Society in affiliation with the State Medical Society.

"You are earnestly requested to be present at this meeting, as matters of great importance to the profession will be discussed and fully explained."

W. H. HAUGHEY, M. D.,
Councilor for the Third District and
Secretary of Council.

The next Annual Meeting of the Michigan State Medical Society will
be held in Detroit, June 11th and 12th, 1903

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Original Articles

PRESIDENT'S ADDRESS.

THE MICHIGAN MEDICAL SOCIETY.

It's First Eighty-three Years—Present Wants, and Suggestions for their Supply.*

LEARTUS CONNOR,
Detroit, Mich.

PART II.

The second stage in the evolution of the Michigan Medical Society started with a meeting held at Ann Arbor, March 30th, 1853, and ended with an aborted meeting at the same place March 29th, 1860. The abolition of all medical laws by the Legislature in 1851 threw the profession of the State upon its own resources. Feeling the need of some sort of organization for mutual aid, inspired by a desire to assist the young Medical Department of the Uni-

versity (started in 1849); catching something of the enthusiasm of the young editor of the first *Michigan Medical Journal*, Dr. Edmund Andrews, the profession organized after the fashion of the conventions of that time.

New wants had come to the profession, and it planned for their supply. By its medical college it had entered upon a systematic training of its future members. By its medical journal it sought to stimulate the older men to larger observation, more frequent record of their work, and the encouragement of local medical societies.

Happily, the editor of the *Peninsular Medical Journal* was chosen Secretary, and continued such till his removal to Chicago three years later. He was also demonstrator of anatomy in the medical school, and instructor in comparative anatomy. A man of exceptional ability, clear in thought, clean in life, a marked man among kings, he started the enterprises well.

*Read at the Meeting of the Michigan State Medical Society, held at Port Huron, June 26 and 27, 1902

Of the scholarly ability, the indefatigable industry and upright life of his successor, Dr. E. P. Christian, late of Wyandotte, all who knew him will speak in exalted terms. As Secretary he faithfully served the Society till, amid the financial earthquake of '59 and the ominous rumbling of the approaching storm of the great Rebellion, it closed its doors.

Its Presidents were all men of mark—in order as follows:

George Landon, of Monroe;
Henry Taylor, of Mt. Clemens;
Zina Pitcher, of Detroit;
J. H. Beach, of Coldwater;
N. D. Stebbins, of Detroit;
J. Adams Allen, of Kalamazoo;
H. B. Shank, of Lansing.

Its eighth annual meeting was called at Coldwater, January 18, 1860, but, so few being present, it adjourned to Ann Arbor, March 29th, when, discouraged by the few present, it disbanded. Its total membership was 115, and its work admirable, worthy of the State at that time. The presidential addresses were thoughtful, forceful, discussion of topics pertinent to professional interests. So far as records show, a singular unanimity prevailed—the more surprising because of the heated contests of both former and later years.

Its papers covered a wide range of topics; especially rich were they in observations upon the meteorology and health of the several localities—topics now covered by health and sanitary boards. It originated movements which finally resulted in the proper care of the insane in institutions owned and conducted by the State instead of by counties; movements for the proper registration of deaths, births and marriages; for State and local health boards; for an anatomical law so

that an inquiring medical student might study human anatomy without running the risk of being mulct of two thousand dollars or spending two years in a cell with a midnight assassin.

Among the obvious causes of its downfall were:

1. The commercial disasters of 1857;
2. The growlings of the approaching civil war;
3. The natural operation of the feuds of former years;
4. The lack of stimulus from opposition;
5. Last, but not least, the absence of the sustaining interest of many local societies.

From the fact that the Society breathed its last at Ann Arbor it would seem that the Medical Department and its friends were not anxious to prolong its life.

The *Peninsular Journal* had struggled in conflict with its rival, the *Independent*, and finally combined with it and then dying—all of which must have been depressing.

While the election of Dr. Pitcher to the Presidency of the American Medical Association, at its first Detroit meeting in 1856, gratified his friends, it rendered his enemies the more bitter and so failed to advance the State Society.

During these seven years the profession learned to conduct a medical society without State support. ('Tis interesting to note that the report of its last meeting was published at State expense, doubtless because so many members were common to both Society and Legislature, and interested in pushing certain matters in each, as the completion of the Kalamazoo Asylum.) As a leader in these bodies was Dr. Foster Pratt, who for many years served the medical profession with marked

ability in all its notable movements. He was one of the ninety thousand men sent by Michigan to defend the Nation's life. With him went a host of doctors whose written and unwritten work show that this Society failed not its country in time of peril.

The third period in the evolution of the Michigan Medical Society began with 1866, and now at the end of thirty-six years is incomplete. Many of its founders are still with us to give the boys pointers along the line of medical and surgical work. We need their mature judgment and wise counsel in solving the problems of reorganization before us.

During these thirty-six years our records show 1,478 members admitted, 868 removed, resigned or died, leaving a net result of about 610.*

Among the conditions favoring the formation of this Society we note: (1) The closing of the civil war left many energetic, wide-awake young doctors in Detroit without adequate clientele—through a medical society they saw a chance. (2) Efforts to remove the Medical Department of the University to Detroit, though long continued, had failed, while they advertised the waste of clinical material. (3) Clinical instruction as the leading feature of the coming medical education was everywhere emphasized.

With such conditions it is easy to see that personal ambition and economic thrift urged the establishment of a medical college in Michigan's commercial metropolis. After the example of the founders of the University Medical School, the promoters of the enterprise began with a medical journal, the *Detroit Review of Medicine*

and *Pharmacy*; then followed, the same summer, the Michigan Medical Society, and, lastly, in 1868, the Detroit Medical College.

Naturally, the Medical Department of the University exerted itself to retain and increase its hold upon the profession, and so its friends took active part in the Society. To offset the *Review of Medicine*, the *University Medical Journal* came into life. Through these, and other, agencies, friendly contests waged in and about the Michigan Medical Society, making it a lively affair till, by processes of evolution, both were fully occupied in other directions, when both the *Review* and *University Medical Journal* disappeared, as in any sense exponents of the separate medical schools. All parties had need of the Michigan Medical Society, hence its increase in size and influence.

Meantime the methods of the old time political convention, with its parliamentary contests; its personalities; its oratorical play to the galleries, became inadequate. After much discussion, in 1887, its scientific work was separated from the legislative, executive and judicial, and done in three sections, under the guidance of separate chairmen and secretaries. Thus more time was had for papers and fuller discussions, as the published transactions abundantly demonstrate. Further, this change multiplied offices, and so to a greater degree appeased the hunger for such diet. As scientific discussion rarely induces loss of temper, the sections disposed of much surplus energy in a peaceful manner.

Of the Presidents, eighteen are dead and seventeen living—one, Dr. J. H. Jerome, was elected twice, in 1867 and 1881—doubtless presidential timber was scarce in '81, as during the first period

*Adding the membership of the three periods we have total of 1,656 for 83 years.

when Dr. Zina Pitcher was fourteen times President.

Of Secretaries we have had four: Dr. George E. Ranney for the first twenty years, then in order, Drs. George Duffield four years, C. W. Hitchcock six years, Collins H. Johnston four years, and A. P. Biddle two years; the first a soldier in the civil war, the last in the Cuban war.

During its first period the Michigan Medical Society limited itself largely to the execution of State laws regulating the practice of medicine, doing little to develop its members along scientific or literary lines, or to foster, encourage or develop county societies.

Its second period stimulated members to observe, record and publish facts relative to local climate, epidemic diseases, public health, as well as those relating to private practice. It strongly insisted upon the observance of the code of ethics, American Medical Association; it encouraged the *Peninsular Medical Journal*; it urged the Medical Department, University of Michigan, to a higher preliminary requirement and better professional training; but it remained a large local society, doing nothing to foster, encourage or develop local medical societies.

Its third period began with an impulse to utilize the clinical advantages of Detroit, but it promoted the development of State Insane Asylums in lieu of the wretched county lazzar houses for the herding of the insane; it initiated the movements that led to the formation of proper state and local health boards, proper registration of deaths, births and marriages; some sort of restriction of free trade in medical practice, to those competent for the work; and numerous other enterprises having for their object the application of the latest scientific knowledge to

the betterment of the physical lives of our citizens.

Its jealousy for membership at once competent and clean drew it into a controversy relative to the educating of homeopathic students by the regular faculty of the University. While it had no legal penalties with which to enforce its ideas, a simple disapproval of the proposed scheme brought upon its head a veritable storm of thunder and lightning compared with which the terrors of Mount Sinai was a summer breeze. The final result was the establishment of a sectarian medical school entirely distinct, so that it cannot be said that our own school gives aid and comfort to such as seek to make the world believe "a part equals the whole."

These and allied activities are at once the index of virile force in the Michigan Medical Society and a stimulus to its further development.

Papers and discussions were greatly multiplied by the sections, thus attracting more scholarly persons and raising its scientific standard. During both periods it was a voluntary association, differing from local societies by drawing from a larger field, holding less frequent but longer sessions, and giving aid and comfort to those disgruntled with the local society or unwilling to co-operate therewith.

In spite of the stimulus of the most remarkable period in all medical history, our growth in numbers from 100 to 610 during thirty-six years has been disappointing. It is especially discouraging that members drop out, by failure to pay dues or because they find the Society unprofitable. Alabama, with but 1,700 physicians, has 1,200 in the State Association. Baldwin County, 125 miles long, in which are but nine physicians, eight belong to the County Society.

The present wants of the Michigan Medical Society are three:

First—A membership of three thousand, and provision for keeping pace with increasing population.

Second—Sixty County Medical Societies, instead of fifteen, with plans for increase to the limit.

Third—A force adequate to the growing of a live medical society in each district, and bringing each doctor of that district into active fellowship therewith.

How shall these wants be supplied?

Time forbids a complete answer, were data available; to aid each in formulating such answer, we present the following suggestions:

1. Work, tactful, persistent, by intelligent representative persons, is absolutely essential. To secure these the Society must be divided into Councilors, Delegates and Members; the first attending to the business, the second to the scientific work; thus we ensure a small body of representative men for planning details and supervising their execution.

2. The Society will avoid all political entanglements because it has learned that they develop antagonisms from the "outs," enervate the "ins," or reduce both to the level of the lowest. Far better retain the method of our past two periods and relegate to special boards all police duties in regulating the practice of medicine—said boards representing the several sects patronized by the people. We may do much to secure the best individuals on the boards and compel their obedience to the law. Such independent position will enable us to lead in all movements for the application of science to the common good, and have our leadership recognized.

3. For fifty years the Michigan Medical Society has been weak, in an organiza-

tion, so compacted that when one suffers all suffer; when one prospers all prosper. Since such can spring only from correct sociological principles, and be perpetuated by their continuance, education is our watch-word. This must be persistently continued along three lines: A—The perfecting ourselves in professional ability; B—mastering the best methods of co-operating for common aims (Medical Sociology); C—teaching the laity how to apply scientific knowledge for their advantage.

Our past shows prosperity as one or all of these have been employed. Before 1851 the Society published nothing, and so its educational power was at a minimum—its opponents published much, to our disadvantage. From 1851 to 1870 the Society utilized the medical journals. Since 1870 it has issued yearly volumes. Both methods of educating promoted our work, increased enthusiasm, and raised our standing.

We have augmented our knowledge, educated and gained influence with the laity by efforts to establish and maintain boards of health; registration of vital statistics; regulation of the practice of medicine; to secure the proper care of the insane, deaf, dumb; to establish and maintain hospitals, dispensaries; to obtain such school buildings as would better fit them to train young children to sound citizenship; to teach the correct principles of drainage, sewerage, water supply, plumbing, heating, etc. For this purpose we have used the lay press as well as medical and other scientific journals.

Just now the question presents: Cannot we increase our educational power by changing our official form of publication?

New York and Illinois tell us in emphatic phrase, supported by facts and

figures, that their state society medical journals have increased their incomes, multiplied their membership, and augmented their enthusiasm, far beyond their wildest dreams. May not this modern method serve us equally well?

It is suggested that this meeting, by specific resolution, direct the Publication Committee to issue the transactions in the form of a monthly journal, to be known as *THE JOURNAL OF THE MICHIGAN MEDICAL SOCIETY*. To aid this committee it is suggested that four members be appointed till their successors be elected. To this Board of Publication, all matters relating to the expenditure of money shall be referred, without debate, and on it shall be placed all responsibility for the *JOURNAL* management. It shall organize immediately after appointment, hold at least one meeting, and submit an annual report of its acts.

4. Inquiry respecting the early death of many local societies reveals the conviction that the cause was "too big a dose of unworthy members." Possibly wise missionary work might have saved both individuals and society. Our predecessors paid much attention to membership, and we reap the reward. We may not license to practice, but we can assure in our members fitness for work much higher than that exacted by a legal examining board: one toward which the latter may aim, and thus insure, for the future, doctors better than ourselves—a course promotive of the highest good of this Society.

5. It is suggested that this meeting appoint a Councilor from each Congressional District, who shall hold office for six years or till his successor be elected, so arranging the terms that two shall be elected yearly thereafter. Their duty shall be the promotion of new county societies,

reviving old ones, and adjusting misunderstandings. The expense of this work shall be paid by this Society, to the limit of \$25 yearly to each Councilor. The Councilors shall organize immediately after appointment, hold at least one meeting, and submit to this Society an annual report.

6. It is suggested that each Vice-President, by resolution, be directed to place himself in connection with the Councilors of the three Congressional Districts nearest his residence, so as to render all possible aid in the work of promoting the formation, development and healthful activity of local medical societies within his territory.

7. More than eighty years ago this Society arranged a reciprocity with other State societies having standards equal with ours, so that individuals on removing to such State were accepted by its society, and its members on removing to ours were accepted by us, so avoiding the annoyance of re-election. If re-enacted, this reciprocity in State society membership would enhance our membership value and encourage the maintenance of good standing therein. A bank note current at face value in forty States is more desirable than one current in one State.

8. Never has this Society made special effort to retain till death, members of long standing and faithful service. One by one each becomes incapacitated for active effort. Why not form a Roll of Honorary Members, with full privileges but without dues? Scant knowledge of men is required to know that these veterans would, most efficiently, promote enlistment of their young medical friends, and their love for this Society grow stronger as they neared their eternal home. It is suggested that the Committee on Re-organi-

zation define the limitations needful to make and keep this a roll of honor, and select the names of those now eligible, and that additions hereafter be yearly presented by the Committee on Nominations, the Society electing them as other members.

Lastly, for eighty-three years the Michigan Medical Society has kept step with the onward march of medical progress. It remains to gather wisdom from our past, from our sister state societies, from the American Medical Association, and medical sociology and use it as a guide to enlist the cordial co-operation of every physician in making the Michigan Medical Society worthy of its magnificent domain, its glorious past, and our universal brotherhood.

THE VALUE OF THE EXAMINATION OF THE BLOOD TO THE GENERAL PRACTITIONER.*

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If credit belongs to one factor more than another for the marked progress in the science of medicine during the past quarter of a century it undoubtedly is due to laboratory workers, as from their study and work has come a better understanding of the etiology of pathological conditions; making possible a more correct and rational treatment, greater therapeutic accuracy, and a more definite knowledge of the course of disease processes. The microscopical examination of the sections for signs of malignancy, of sputa for the tubercle bacilli or elastic tissue, cultures taken from the throat and their examina-

tion to differentiate diphtheria and tonsillitis, of pus and secretions to determine the exact infecting germ, the examination of the stomach contents both microscopically and chemically for evidence that will support or disprove clinical symptoms, the use of the microscope in the study of lesions of the skin, and more recently the examination of the blood, all demonstrate the value of laboratory investigations and their clinical application in diagnosis. Success in the practice of medicine, from a scientific standpoint, requires a knowledge of these modern methods. In surgery, earlier operative intervention made possible by a prompter diagnosis, has resulted in greater lessening of suffering and saving of life, and in internal medicine the element of doubt may often be removed, proper treatment adopted, and a more correct prognosis given. The physician with a conscientious regard for his patient's welfare should recognize the duty devolving upon him; and with a recognition of the great value of these methods, apply them in the management of his cases. As a result of a familiarity with them, greater responsibility rests upon him and an incorrect diagnosis is the more reprehensible. The methods of dealing with morbid states have so changed in the past few years, having become more accurate and exact through the recent aids to diagnosis, that the doctor must constantly advance and adopt new ideas as they are proven to be of value.

To hold the confidence of the public and retain his standing in the profession, he must be inspired by the teachings of today and not those of twenty-five or even ten years back. Modern methods do not imply less thoroughness or painstaking care in the bedside examination of the pa-

* Oration on Medicine, Annual Meeting, Port Huron, Mich., June 26, 1902.

tient and study of the case; nor less skill exercised in the detection of pathological lesions; but in addition to the physical examination, these newer methods are potent aids, supplementing other means and in many cases absolutely essential to making a correct diagnosis, and without whose aid many cases must perforce be treated blindly.

Even with the most experienced clinicians the diagnosis often remains in doubt and the course of the disease not thoroughly understood; and any means that will assist in dispelling the doubt should be understood and tried. To the older practitioner particularly are these methods of greater value; and he will the more correctly interpret the clinical symptoms, and the results of laboratory examinations, and be less easily misled. In the study of pathological conditions, their etiology, course and treatment, haematology, the study of the blood, now occupies a very prominent and important position, and there has been such a vast amount of study and research done in this branch of medicine that its practical utility can no longer be questioned. Neither is it a fad of a few enthusiasts limited to laboratory work with no bed-side experience; and though there remains much to be learned in its clinical application, the examination of the blood has already been demonstrated as a rational scientific procedure of great value. It has been shown by a study of the blood in certain diseases that deviations from the normal so constantly occur as to be considered pathognomonic. The importance of blood examination to the physician and surgeon has become a recognized fact, and the many articles on the subject during the past year are significant.

An increasing number of physicians each year include the examination of the blood in their methods of diagnosis, but there remains a very large majority, particularly among the general practitioners, to whom it should be of the greatest importance, who do not make use of it. In our own State it is no exaggeration to say that fully ninety per cent. do no blood work themselves nor do they have it done for them.

Through a correspondence with a large number of physicians I learned that less than ten per cent. made even the simpler or more common examinations; those which by experience they would find invaluable and the technique of which could be readily acquired. With this apparent apathy or disregard of a valuable and essential diagnostic method a consideration of the subject at this meeting is both timely and important.

Until very recently students have been graduated from most of the medical colleges with little or no training in this work. Due importance has not been given it by their teachers and they begin the practice of medicine with scant knowledge concerning it, less familiarity with its technique, and far too little appreciation of its worth. It is not right that men should enter the practice of medicine handicapped by inefficient training in any important aid to diagnosis. It lessens the possibility of their success and lowers the standing of the profession. The argument that urgent cases permit of no time for the examination of the blood shows that a misconception exists regarding the time which such an examination requires. The busy country doctor with a large practice and long drives feels that his day's work is already crowded; but if he would make it his habit to carry with him,

as he does a thermometer or hypodermic syringe, the blood counters and a few cover glasses, occupying but little space, it would not often become necessary for him to make a special trip to examine the blood; and the benefit accruing to him in the management of his cases would in the long run be time saved. But a few seconds are required at the bedside to prick the finger, draw the blood into the pipette and dilute with the proper solution. On returning to his office the corpuscles can, with but little practice, be counted in ten or fifteen minutes, while the more expert need but a third of that time. The device of Tallquist for estimating haemoglobin can easily be carried in an inside coat pocket and makes the bedside determination of the percentage of haemoglobin both simple and practical. By having a few cover glasses in the pocket a blood spread may easily be made and readily carried, when dried, to be stained later. In malarial localities where the diagnosis of so common a disease can promptly be made by examining the blood this is of greater importance. Counting the white and red corpuscles, estimating the haemoglobin, and examining the stained specimen are always available; while in office practice may be added the examination of the fresh drop.

Recent editions on Haematology by American authors show an exhaustive amount of study and work, and make clear the technique and its clinical significance. There is no reason why every doctor cannot qualify himself to examine the blood, and the importance of these examinations to him no longer admits of argument. The reasons of its greater value to the general practitioner are obvious, as it is his privilege and good fortune to be called in attendance upon the sick at the

onset of morbid conditions, when the efficacy of therapeutic measures are more pronounced and the extension of the lesion more promptly checked or its course greatly modified. Impelled by a conscientious regard for the welfare of his patients, the physician should be able to adopt all means that may assist in the making of an early definite diagnosis. An examination of the blood may often be the only means of determining the true condition; and by it the course of the disease better understood, dangerous complications earlier recognized and the results of treatment more accurately known. It is a not infrequent experience for the diagnosis to remain several days in doubt, notwithstanding a thorough painstaking physical examination has been made; and in just such cases, with conflicting clinical signs, will a blood examination often clear the horizon and be of inestimable value. The examination of a patient can no longer be considered thorough or complete that leaves out the examination of the blood.

Our judgment regarding the presence or absence of anaemia or its severity will often mislead us if the clinical signs and appearance of a patient are the only means of forming an opinion. Estimation of haemoglobin, the blood count and examination of the stained preparations make possible greater certainty and accuracy in diagnosis; and the differentiation of the different forms of anaemia from each other, or from other conditions accompanied by marked changes in the blood is only possible by this means. Severe anaemia has often gone unrecognized by experienced clinicians until the blood has been examined. Though in most cases of simple anaemia or chlorosis the diagnosis may be made in the usual way, the con-

firmatory evidence of the blood examination is of value and makes possible a knowledge of the exact degree. Frequent examinations will show the effect on the blood of medication and give us accurate information of the progress of the case. In pernicious anaemia a definite diagnosis is impossible without the blood examination. Cabot states that it may be indistinguishable from chlorosis or from secondary anaemia due to carcinoma. He reports such a case where the diagnosis of pernicious anaemia had been made; a lemon yellow color of the skin had been gradually acquired without assignable cause, loss of flesh, vomiting, pain or any localized symptom. His examination of the blood showed that it was not pernicious anaemia, but that the anaemia was evidently secondary; which was confirmed ten months later by the autopsy showing cancer of the stomach present. "The pallor of chlorosis and pernicious anaemia," he says, "is not always different either in degree or kind, and the symptoms and physical signs may be identical." His reference to four cases diagnosed as leukaemia, which an examination of a stained preparation of the blood proved to be incorrect, and later were shown to be malignant tumors of the kidney, is also evidence of the necessity of these examinations. The correct diagnosis of any of these diseases requires a careful and thorough examination of the blood; and failing to do it is unscientific, inaccurate, and slipshod. It has been recently observed that counting the red corpuscles and estimating the haemoglobin will differentiate chlorosis from exophthalmic goitre.

There is no disease which gives rise to more mistakes in diagnosis nor which may be earlier recognized than malaria. Laveran's discovery of a parasite in the

blood associated with the symptoms of malaria, and the demonstration of its etiological relation to that disease marks an epoch in medicine. In the examination of the blood its detection makes a diagnosis certain and it should be looked for in all cases where the clinical symptoms suggest malaria, and in malarial sections the blood should always be examined where there is any doubt regarding the nature of the disease. Aside from the presence of the parasite making the diagnosis certain, the changes in the leucocytes are of value; which in all uncomplicated cases show a marked decrease. Thayer states in his monograph that "the presence of an appreciable leucocytosis is strong evidence against the existence of uncomplicated malaria." It has been also shown that with this decrease in the leucocytes there are certain constant qualitative changes; the large mononuclears being relatively increased while the polymorphonuclear neutrophils and small lymphocytes are decreased. These changes are unaffected by the action of quinine.

Yet with this simple means for a positive diagnosis at hand there is to-day no term more loosely used by the general practitioner than malaria, and it is not uncommon for diseases more or less resembling it to be treated for weeks with an incorrect diagnosis, and the physician often in doubt, yet making no effort to examine the blood. The experience of our surgeons during the recent war with Spain showed how frequently a mistaken diagnosis could be made without an examination of the blood. In the official report on the origin and spread of typhoid fever during the way of 1898, by Drs. Reed, Vaughan and Shakespeare, it is stated "that most cases of typhoid fever improperly diagnosed were sent to the general

military or civil hospitals with a diagnosis of malaria; and in 80 out of 85 cases sent to civil hospitals in Baltimore the diagnosis was changed from malaria to typhoid fever." They also state that they do not believe that the mistakes were more common than by physicians throughout the land. There is certainly no more forcible argument than this experience of our army surgeons, for the examination of the blood in all cases where malaria is possible or suspected.

Typhoid fever is another example of the importance of blood examination, both in differentiating it from malaria, as already referred to, and from other diseases which may simulate it. Influenza, meningitis, military tuberculosis, central pneumonia, and appendicitis have all been difficult to distinguish from typhoid fever in the early stages, when by the clinical symptoms alone a positive diagnosis may be impossible to make. The study of the blood will assist both by the Widal test and the leucocyte count. The clinical value of the serum test was first demonstrated by Widal in 1896 and has been found reliable in fully 95 per cent. of all cases of typhoid fever. Not being present, however, until the end of the first week and in some cases even later, it can be of no assistance in the first few days, when a correct diagnosis may be of the greatest importance. At this time, however, the leucocyte count will positively distinguish it from most cases of appendicitis, non-tubercular meningitis or pneumonia. The element of doubt so often referred to in distinguishing appendicitis from typhoid fever need not exist when the blood count is used, as in the very large majority of cases there is a marked leucocytosis, while in typhoid fever the leucocytes are seldom increased at the onset, and decrease dur-

ing the course of the fever. In those cases with exaggerated cerebral symptoms during the first week, it may be difficult to rule out meningitis by the clinical symptoms alone; but the absence of leucocytosis will make the presence of the latter disease improbable. This value of the blood count is shown by a case I saw in consultation last winter. The patient, a young man, had been taken suddenly sick the previous day, and when first seen by his physician had a temperature of 105 degrees, rapid pulse, intense headache, periods of marked delirium, followed by a semi-comatose state. The heart and lungs were negative and no evidence of abdominal lesion. The possibility of so serious a disease as meningitis could only be ruled out by the blood count, which in this case showed a normal number of leucocytes. The eruption at the usual time, of small-pox, made the diagnosis clear. There were only two cases of this disease in the city at the time, over a mile from his home, and no history of exposure on his part, as far as could be learned. The examination of the blood may be of great value in the management of typhoid fever and the prompt recognition of serious complications made more certain. The increase in the leucocytes will, in connection with other symptoms, assist in the early diagnosis of a perforating ulcer or the presence of pneumonia or appendicitis. This is illustrated by a case we had under our care two years ago in which appendicitis developed during the second week of typhoid fever, and the examination of the blood made its recognition more certain. The development of severe pain and increased tenderness in the region of the appendix led us to suspect appendicitis; particularly as this aggravation in the symptoms was accompanied by a marked leu-

cocytosis. An operation was immediately determined upon, and there was found a thickened inflamed appendix containing a small piece of lead. The patient made an uninterrupted recovery from the operation, and the typhoid fever pursued its usual course. The presence of other cases of typhoid fever in the same household, and in this case the rose spots and a positive Widal had made the diagnosis of typhoid fever certain and the increase in leucocytes at this time had simplified the recognition of a complicating appendicitis.

The importance of the blood count in appendicitis both in diagnosis, but more particularly in prognosis, is now, I believe, a well established fact. While it is true that the more acute cases can as a rule be recognized by the local signs alone, it is equally true that in these cases where the symptoms are not as marked, a clear, definite diagnosis is often one of the most difficult to establish. And even with the diagnosis made, the extent of the inflammatory process cannot be accurately determined, as the local signs may often be misleading or wrongly interpreted. In connection with the other symptoms, the leucocyte changes may be a valuable factor in reaching a correct conclusion relative to the existing conditions, and have often been found the only indication of danger. So true and important is this fact that a blood count should be made at frequent intervals in all cases where a positive diagnosis cannot at once be made, or for any reason an operation may have to be deferred. Each additional experience has shown that the local signs, pain, tenderness, and muscular rigidity are not infallible guides; and this fact has been demonstrated repeatedly by operations done on the showing of the blood count alone. The reports of such cases by a number of

competent observers have made it evident that the information gained from the blood count, and the management of the case according to its showings have been the means of saving many lives. As an illustration of how serious an inflammation in and about the appendix may exist and yet be unrecognized by the local signs, is the case reported in detail in the *Medical Record* of March 29th, 1902, by Dr. Evans of New York City. Associated with him in the management of the case were some of the ablest physicians and surgeons of that city; yet no diagnosis was made. Dr. Evans summarizes as follows: "This patient was sick five days. Every 24 hours marked a decided advance in the pulse and toxæmia; the pulse increasing about 20 to 30 each day. The temperature remained practically negative from the fourth day after beginning of first symptoms until 30 hours before death; and there was not a cardinal symptom of appendicitis or peritonitis at any time." At the autopsy diagnosis of gangrenous appendicitis was made, with localized incipient gangrene of the small intestine. The lumen of the appendix was distended with a thin dark colored pus.

It is not possible for the general practitioner with a comparatively limited experience in the diagnosis of appendicitis to as clearly distinguish the signs present, as the surgeon with an experience reaching into the thousands, both at the bedside and operating table; and to him particularly will the blood count be of inestimable value.

In pneumonia the increase of leucocytes may be of great value in leading to an early diagnosis, when by the absence of definite local signs, as in those of central origin, it cannot clearly be defined. Nearly all cases are accompanied by a

marked leucocytosis, which has been shown to occur coincident with or soon following the initial chill and continuing until the crisis. The only exceptions to this rule are the very mild attacks, or the extremely grave ones accompanied by an overpowering toxæmia and lack of resistance on the part of the system. By means of the blood count a more positive prognosis can be given. A severe attack, as shown by the usual symptoms, is of greater gravity if it be accompanied by slight or no leucocytosis; and the presence of eosinophiles, which do not return to the peripheral circulation until the acme of the disease has been passed, may be the first indication of a favorable termination, several hours or longer before any subsidence in other symptoms. Cabot has repeatedly seen the diagnosis of pneumonia made in the absence of physical signs; and largely on the evidence of the blood count; the diagnosis being confirmed several days later by the appearance of typical signs of consolidation. He refers to a case of Dr. Shattuck: "Sick 5 days, yet showing no signs of consolidation of the lungs. The presence of a marked leucocytosis excluded typhoid fever, the only other likely diagnosis, and led him to treat the case as pneumonia, the wisdom of which was later demonstrated by the appearance of signs of consolidation."

It is not necessary that the busy practitioner attempt to become an expert in the examination of the blood, but he can and should acquire sufficient skill in the methods most often required, and in doing that much he will become more and more convinced of the practical benefit of it to him. He must familiarize himself with the microscopical appearance of normal blood to correctly interpret pathological changes. The necessary technique in the prepara-

tion and counting of the blood corpuscles demands absolute accuracy for correct deductions. Pathological must be distinguished from normal leucocytosis and the action of digestion and exercise in the cause of the latter understood. The normal puerperal state is accompanied by leucocytosis which may interfere with the use of the blood count in pathological conditions for a few days following labor. Chloroform and ether anesthesia both produce an increase in the leucocytes, as also does the subcutaneous injection of normal salt solution and the administration of certain drugs. Any of these causes may have to be eliminated in arriving at conclusions, but when considered, need not interfere with the practical application of the principle. What the physician needs to recognize is that there are certain definite blood changes to be found in many pathological conditions and that there is great practical benefit in their clinical application. To aim at greater accuracy in diagnosis and to be able to intelligently apply every method that may assist in making it, should be the aim of all.

There remains much to be learned from the study of the blood, and though still in its infancy, sufficient has been demonstrated to establish its value, and the future will undoubtedly reveal for it a much more extended field of usefulness.

Charters have been granted also to the following societies:

Livingston County Medical Society. President, Wm. J. McHench, Brighton; secretary, R. H. Baird, Howell.

Houghton County Medical Society. President, A. I. Lawbaugh, Calumet; secretary, W. K. West, Calumet.

Mecosta County Medical Society. President, Joseph McNeece, Morley; secretary, F. C. Terrill, Big Rapids.

BACTERIAL TOXINS.

VICTOR C. VAUGHAN,
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There has been much discussion concerning the question whether the specific toxins have their origin in the cleavage action of bacteria acting as ferments on the complex proteids in the body or in culture media, or are due to synthetical processes by means of which the bacterial cell builds up its own tissue. For at least a few of the pathogenic germs this question has been practically settled, and it can be definitely stated that the specific toxins of these are synthetical bodies built up by the bacterial cell, and that the cells themselves contain the poison. In 1900 the writer succeeded in perfecting a large incubation tank, by means of which bacterial cells have been obtained in large amount free from constituents of the culture medium, and with the cell substance thus obtained numerous experiments have been made.

The Colon Toxin.—When the colon germ is obtained in large amount and after it has been freed from fat with alcohol and ether it forms a grayish white powder which takes up and holds moisture, but does not absorb enough to materially alter its physical condition. This powdered germ substance when stirred up with water and injected intra-abdominally into guinea pigs or rabbits is highly toxic, causing death in the former animals when used in the proportion of 1:40,000 of body weight, and in the latter in smaller quantities. This intracellular toxin is highly resistant to heat, and the powdered germ suspended in water in a sealed tube has been heated for 30 minutes to 180°C., without appreciable loss of toxicity.

When the germ substance is shaken with a one per cent. solution of sulphuric acid in water and filtered it is found that the clear filtrate on being treated with three volumes of 96 per cent. alcohol yields a flocculent precipitate which, if not allowed to stand for too long a time under alcohol, is readily soluble in water, forming, however, a somewhat opalescent solution. This alcoholic precipitate when dried first between folds of filter paper and then over sulphuric acid in vacuo forms a white mass which when rubbed up in a mortar is converted into a light grayish powder. When some of this powdered sulphuric acid extract of the germ substance is dissolved in water and injected intra-abdominally or subcutaneously into animals it causes death with the symptoms and post-mortem findings practically identical with those which follow administration of the whole germ substance. The part of the germ substance insoluble in dilute sulphuric acid is also poisonous, but much less so than that which is extracted with the acid. These investigations demonstrate that the colon bacillus contains an intracellular toxin which undoubtedly has a complicated constitution and contains two or more toxic groups, one of which is split off by the action of dilute acid. With this bacillus at least, the specific toxin is formed within the cell and does not have its origin in the cleavage action of the bacterium either directly or indirectly. The formation of this toxin is a synthetic and not an analytic process. Under ordinary conditions at least the toxin contained within the colon bacillus does not diffuse into the culture medium. This probably explains the reason why the colon bacillus, although containing a most potent toxin, resides constantly without harm to the individual in the intestines. It also explains

why when this germ gets into the peritoneal cavity and is broken down by phagocytic action the poison is liberated and manifests itself in the production of peritonitis or other inflammatory lesions.

Prolonged heating of the poison of the colon bacillus with one per cent. sulphuric acid destroys its toxicity, and this indicates that the toxin undergoes hydrolytic changes under the prolonged heating which breaks up its molecule into harmless constituents. We have not had time as yet to attempt to immunize animals to the toxin obtained from the cells of the colon bacillus by treating the cell substance with dilute sulphuric acid. It remains to be seen whether immunity can be secured to this poison or not, and if immunity be obtained, whether it extends to the toxin contained in the unaltered germ substance. Marshall and Gelston working in my laboratory have carried out a long series of experiments in endeavoring to induce immunity in guinea pigs and rabbits with the powdered colon germ. With the former animals the result has been practically negative, inasmuch as death has invariably resulted before any high degree of immunity has been reached. With rabbits the results have been somewhat more satisfactory, and they have succeeded in partially immunizing a few of these animals. Rabbits thus immunized furnish a serum which has been found to have a preventive influence in rabbits against colon toxin, but it is practically without effect in protecting guinea pigs. The knowledge which has been gained in the recent studies of the colon bacillus may be summed up as follows:

(1). The colon toxin is a constituent part of the cell, and is formed by synthetic processes which build up cell tissues.

(2). This toxin is highly resistant both to chemical agents and to heat.

(3). The toxin is undoubtedly of complicated constitution and contains two or more toxic groups, one of which may be split off by agents which have a hydrolytic action.

(4). The toxin split off from the cell by dilute acids may be deprived of its poisonous property by the long continued application of heat, especially in the presence of free mineral acid.

The Anthrax Toxin.—Ever since it was admitted that pathogenic bacteria induce harmful effects by the elaboration of poisons, chemists have endeavored to find the specific poison of anthrax. Hoffa at one time claimed that he had found a basic substance, to which he gave the name anthracin, and which he believed at that time to be the specific poison of the disease. However, subsequent investigations have demonstrated that this substance cannot be considered the specific poison of anthrax, and moreover no one else has ever succeeded in obtaining it. Without going fully into the literature of this subject, which, by the way, is quite voluminous, the writer desires to refer to a comparatively recent research by Conradi, in which the work of previous investigators has been reviewed, and is followed by a statement of his own researches. Conradi attempted to solve the question of the existence of an anthrax toxin by the following methods:

(1). He inoculated guinea pigs intra-abdominally with anthrax; obtained peritoneal exudates which formed in these animals in quantities of from 10 to 20 cc., filtered these exudates through porcelain and injected the germ free filtrate into mice, rabbits, guinea pigs and other animals, without any effect.

(2). The organs of guinea pigs which had succumbed to anthrax were rubbed up in mortars with sterilized sand, diluted with physiological salt solution, filtered through porcelain, and injected into rabbits, guinea pigs, rats and mice, without effect.

(3). Sacs similar to the collodion sacs so generally used in bacteriological laboratories were filled with cultures of anthrax and placed in the abdominal cavities of susceptible animals where they remained without detriment to the health of the animal, thus showing that the anthrax bacillus does not produce any soluble toxin. The truth of the matter is that this fact had been demonstrated more than twenty years ago by Pasteur, who filtered both the blood of animals sick with anthrax and artificial cultures of this bacillus through porcelain and injected the germ free filtrate into animals without inducing the disease.

(4). Peritoneal exudates obtained from animals dead with anthrax were sterilized by prolonged and frequent shaking with toluol and after being sterilized in this manner were injected into susceptible animals without effect.

(5). Cultures of the anthrax bacillus free from spores were deprived of vitality by exposure for 110 hours to -16° , and after having been shown to be sterile by being kept in the incubator for some time, were injected into susceptible animals without effect.

(6). Cultures of the anthrax bacillus were exposed to hydraulic pressure of 500 atmospheres and the fluid thus obtained after filtration through porcelain was injected into animals without effect.

(7). The experiments of Brieger and Fraenkel, who at one time reported the

discovery of an anthrax toxalbumin were repeated with negative results.

From these investigations Conradi concluded: "By no method known at present can it be shown that the anthrax bacillus forms either an extra cellular or an intracellular poison in the animal body. Indeed, these experiments increase the probability that the anthrax bacillus does not form any poisonous substance. Therefore the solution of the manner in which anthrax infection results must remain unknown. Whether improved chemical methods will lead to the detection of a poison or not cannot be predicted, but for the present the anthrax bacillus must be regarded as a purely infectious micro-organism."

Experiments carried out in the writer's laboratory by J. Walter Vaughan recently apparently offer a satisfactory solution of the question of the existence of an anthrax toxin. A large amount of the germ substance was obtained and the bacterial powder was heated with one per cent. sulphuric acid in the autoclave at 110° for ten minutes. The clear filtrate obtained with the dilute acid on being treated with three volumes of 96 per cent. alcohol deposited a white flocculent precipitate, which when collected, dried, and pulverized, has been found to be soluble in water and to kill guinea pigs with all the symptoms and lesions of anthrax when injected into the abdominal cavity in doses of from 50 to 100 mgs. It has also been found that the part of the germ substance undissolved by the dilute acid is poisonous, but much less so than that part split off by the acid. The following conclusions have been reached from these studies of the anthrax bacillus:

(1). The anthrax germ does produce an intracellular toxin, which contains two

or more toxic groups, one of which is split off by means of dilute sulphuric acid at the temperature of 110° .

(2). The split toxin is deprived of its poisonous properties by continued heating in the presence of free mineral acid.

(3). The toxin split off by dilute acid is probably basic in character and possibly belongs to a low order of proteid substances, since it does not respond to the biuret or Millon test, but does give the xanthoproteic action.

From this work on the chemistry of the anthrax cell it seems evident that this bacillus in the animal body must undergo certain hydrolytic changes by means of which its toxin is set free. Whether this process of freeing the toxin is a passive one and due to the normal disintegration of the dead cell, or is accomplished by the activity of certain cells in the animal body, remains for future investigations to determine. It seems likely that the cells of the animal body in resisting the invasion of the bacterial cells split the latter up, and in so doing, liberate the poison which destroys the life of the animal. This, however, is a matter of speculation, and any authoritative statement on this subject must await more elaborate investigation.

The Diphtheria Toxin.—The remarkable theory concerning the action of toxins and antitoxins and the mode of the formation of the latter, advanced by Ehrlich, is based upon a large number of carefully conducted experiments with the toxin and antitoxin of diphtheria. The essential points of Ehrlich's theory are as follows:

(1). Toxins and antitoxins neutralize one another after the manner of chemical reagents. The chief reasons for making this statement lie in the observed facts (a) that neutralization takes place more rapidly in concentrated than in dilute solu-

tions; and (b) that cold retards, and warmth hastens neutralization. From these observations Ehrlich concludes that toxins and antitoxins act as chemical reagents do in the formation of double salts. A molecule of the poison requires an exact and constant quantity of the antitoxin in order to produce a neutral or harmless substance. This implies that a specific atomic group in the toxin molecule combines with a certain atomic group in the antitoxin molecule.

(2). Antitoxin is a reaction product of the living organism, and not a transformation product of the toxin introduced in securing immunity. According to Ehrlich, when the toxin is introduced into the animal body in small quantities it combines with certain side chains in the molecules of the living cells. These side chains are supposed to be necessary for the proper functioning of the cells which, finding themselves deprived in part of their function, on account of combination with the toxin, elaborate more side chains. As an illustration: When a small quantity of tetanus toxin is introduced into the animal body it combines with certain side chains of the molecules of the cells of the central nervous system, and renders these atomic groups useless so far as the nutrition of the cell is concerned. In order to compensate for its loss the cell produces another side chain similar to the one of which it has been deprived. Being called upon repeatedly to exercise this activity, there is not only compensation, but over-compensation, and the result is that more side chains are formed than the cell can use, and these break off and float away in the blood, constituting the antitoxin. Moreover, the atomic group, or side chain, after being liberated from the cell may acquire greater avidity for combination with

the toxin, or in other words, the toxin will combine more readily with these side chains when free and floating in the blood than when they constitute parts of the molecules of cells.

(3). Diphtheria toxin, as it exists in sterilized cultures, is composed of equal parts of toxin and toxon. The latter has no serious effect upon animals. It may cause local oedema, but it never kills. The toxin, which may be regarded as inert, has quantitatively the same power of combination with the antitoxin as is possessed by the toxin, but combines with the antitoxin with less avidity.

(4). The well known fact that crude diphtheria toxin decreases in toxicity on standing has been explained by supposing that there is a gradual conversion of the toxin into toxon, while the other equally well observed fact that the toxin of diminished toxicity requires the same amount of antitoxin for its neutralization as the original toxin did is explained by the theory that toxon and toxin combine with antitoxin in the same proportion.

Gelston, at work in my laboratory, has shown that in addition to the soluble diphtheria toxin, which exists in cultures of this bacillus, there is also an intracellular toxin. Moreover, he finds that commercial diphtheria antitoxin, while it protects animals against the extracellular poison fails to afford protection against the intracellular toxin. This undoubtedly explains the facts which has been observed by others that certain animals which are practically immune to diphtheria toxin are not immune to diphtheria infection. Whether or not an antitoxin for the cellular toxin of diphtheria can be produced in animals artificially remains to be determined. The relation between the cellular

toxin and the soluble poison also opens up a question of interest and importance, which must be solved by future investigation.

On October 8th, 15th and 22nd will occur the organization of the medical societies of Ionia, Lapeer and Washtenaw Counties, respectively.

The Wexford County Medical Society has been organized. Dr. B. H. McMullen, Cadillac, was elected President, and Dr. G. D. Miller, Cadillac, Secretary.

On October 14th the physicians of Lenawee County will formally organize the Lenawee County Medical Society. On the same day will occur the organization of the Jackson County Medical Society.

A charter has been granted to the recently organized Houghton County Medical Society. The officers are Dr. A. I. Lawbaugh, of Calumet, president, and Dr. W. K. West, of Calumet, secretary.

A charter has been granted to the Oakland County Medical Society, which was organized Sept. 9, 1902. Dr. F. B. Galbraith, Pontiac, President, and Dr. Wm. McCarroll, Pontiac, Secretary, will look after the society's interests during the coming year.

Most satisfactory reports have reached us from Livingston County of the organization of a county medical society there on Sept. 17th. Of twenty-four physicians in the county, eligible to membership, nineteen have already joined the society. Dr. Wm. J. McHench, of Brighton, was elected president and Dr. R. H. Baird, of Howell, secretary. A charter has been granted.

At the Annual Meeting of the Society, Port Huron, June 26th, 1902, before the Section on Surgery the following symposium was delivered:

THE SURGERY OF THE KIDNEY

- (a) Floating and Movable Kidneys,
- (b) Calculus in the Kidney and Ureter,
- (c) New Growths of the Kidney,
- (d) Acute Kidney Infections,
- (e) Surgery of the Kidney in Tuberculous Conditions,

RICHARD R. SMITH, Grand Rapids.
T. A. MCGRAW, Detroit.
A. S. WARTHIN, Ann Arbor.
T. A. FELCH, Ishpeming.
W. H. HAUGHEY, Battle Creek.

FLOATING AND MOVABLE KIDNEYS.

RICHARD R. SMITH,
Grand Rapids, Mich.

The tendency of the past few years in treating movable kidneys has been toward a greater conservatism. This has been brought about by a more general recognition of several facts.

First—That a large percentage of movable kidneys produce few, if any, symptoms.

Second—That where we find a movable kidney, in many cases we will also find a prolapse of the stomach, intestines, liver and even spleen, and that the general displacement of all these organs and not of the kidney alone accounts for the symptoms.

Third—That in many of these cases the neurasthenic element is well marked and the pain in question is due to this condition and not to the kidney itself.

Fourth—That operation fails in many cases to retain the kidney permanently in place and that in these patients neither an actual nor a symptomatic cure is obtained.

Fifth—That a well directed treatment, other than surgical, produces oftentimes symptomatic cures which are satisfactory.

A more general recognition of these facts has brought about a more careful selection of cases for operation. Personally I do not advise operation except in those cases where other means have been faith-

fully tried, where the symptoms can be directly traced to the kidney and in which the neurasthenic element is not marked.

Nephrectomy was early practiced for the relief of this disease. It was found, however, to be attended with a considerable mortality and nephrorrhaphy has been generally substituted. The number of operations which have been devised are legion. They may be divided into three classes: those in which a foreign substance, as gauze, is packed about the kidney, the resulting adhesions forming the future support of the organ; those in which the kidney has been stitched to the lumbar fascia without opening the capsule; thirdly, those in which the capsule is partially removed and the kidney substance brought into direct apposition to the fascia or muscles of the incision. There have been many details of more or less value suggested and carried out by different operators, but the three operations described below are types and will serve the purpose for a general description.

First.—The operation of Nicolas Senn. The fatty capsule is removed or pushed aside and a strip of gauze placed about the lower pole of the kidney in such a way as to suspend the kidney as in a hammock. The ends of the gauze are brought out through the incision, which is left entirely open. The gauze is removed in a few days and the wound allowed to heal by granulation.

Second.—This operation has been described by Goelet and has been carried out, often with modifications by different operators. The fatty capsule is stripped back or partially removed as may be necessary, the kidney brought well into the incision without removing the true capsule, a suture is passed on a needle in a longitudinal but slightly oblique direction, the needle entering the kidney at a point on its posterior surface some little distance from the upper pole. The needle and suture emerge half an inch or so from the point of entrance and are inserted again near the point of exit, pass in a transverse direction taking in about the same amount of kidney substance again and emerge once more near the convex surface. Another similar bite brings the needle and suture out near the original point of entrance. This, as will be seen, forms a triangle, encompasses quite a little of the kidney substance and affords a firm grip for the suture. The two ends of the suture are then sewed into the lumbar fascia on the side nearest the vertebra. If desired, several such triangles may be made lower down on the kidney in a similar manner. This brings the posterior surface of the kidney up against the lumbar fascia, dependence being put upon the adhesion so formed for the future support of the kidney.

Third.—This operation is best described and carried out by Edebohls. The usual lumbar incision, either vertical or oblique, is made, the fatty capsule of the kidney partially removed, the kidney brought well into view and the capsule split from end to end by an incision made on a grooved director to avoid injuring the kidney and thus causing troublesome oozing. The flaps are then reflected so as to expose a surface of about three-fourths

of an inch in width on the convex surface of the organ. A catgut suture is then passed on a curved needle through the fascia at the upper angle of the lumbar incision, then through the reflected capsule an inch or an inch and a half from the upper pole, deeply through the substance, and out again through the reflected capsule on the other side, and then through the fascia opposite the point at which the suture first entered. Five or six sutures are then passed in this manner, about three to the inch, through the fascia and kidney below this point. Care must be taken to put no undue strain upon these sutures for fear of tearing the kidney. Other sutures are passed independently through the fascia alone, to avoid bringing undue strain upon the kidney sutures when the incision is closed. When all is ready, the original sutures are gently tightened, bringing the denuded surface of the kidney well up against the incision; the sutures passing through the fascia alone, being then tied, and, last of all, the kidney sutures themselves. The skin and underlying tissue may be brought together with silkworm gut. All kinds and sizes of catgut have been used in this operation, according to the habit of the operator.

The operation of Edebohls has the disadvantage of rendering more or less traumatism to the kidney sutures. An operation which simply sutures the capsule itself, on either side, to either side of the incision without injuring in any way the kidney substance itself, has seemed to me to be equally as efficacious and does away with the objection of the operation just described.

Any of these operations may be attended with relapses, still, a considerable proportion of them are effectual and the results oftentimes brilliant.

CALCULUS IN THE KIDNEY AND URETER.

THEODORE A. McGRAW,
Detroit, Mich.

It has seemed to me best, on presenting this subject for discussion, rather to confine myself to a brief outline of its various phases than to enter into a long and exhaustive discussion.

As regards the etiology of kidney and ureteral calculi, the division sometimes made into primary and secondary seems to me unpractical. There are no primary calculi, for their formation always depends upon some antecedent abnormality. Neither may we consider them as aseptic or septic in their origin, for the reason that those which have originated in the lodgment of some septic germ in the kidney may nevertheless, when the germ has been incrustated by urinary salts, pursue henceforth a perfectly aseptic course, while others which were aseptic in origin may cause irritation and abscess. It is better to study first the causes which are predisposing, then those which are exciting, and determine, if possible, whether there are any which might be avoided by a proper hygiene.

According to authors, who have made this field the especial object of their study, heredity plays an important part in the production of urinary calculi. In some families the malady has been traced through several generations. While the fact that the members of such families have been exposed to a similar environment, living over the same soil and in the same climate, and eating the same kind of food and using the same kind of drinks, must not be forgotten, yet it must also be remembered that neighbors who have lived very nearly after the same

fashion have enjoyed an immunity from the disorder. The conditions which make this hereditary tendency are, in all probability, peculiarities in the formation of the kidneys and ureters, and possibly in some of the digestive organs, which repeat themselves in several generations. We may seek for a main predisposing cause of stone, in defective developments, which act either in causing some abnormal secretions of urine or in obstructing the discharge of that fluid. That errors of development are largely responsible for the formation of stone is rendered probable by the fact that nearly half of all cases of stone occur in children under twenty years of age. Between twenty and forty years stone rarely originates. After forty the beginning degenerations play a part, which will hereafter be considered.

The gross abnormalities which affect the secretion and discharge of urine are those which are manifested in altered shape or position of the kidney, or in some peculiarity in the manner in which the ureter issues from the pelvis of the kidney. It is easy to understand how urine would stagnate in a pouch formed in the pelvis of the kidney if the ureter were connected with that pelvis high up on the side instead of at its most dependent portion.

So, too, a narrowing of that canal at the upper portion might favor the deposit of salts. It is not impossible, too, that the small tubules might prove insufficient for the discharge of urine and thus serve as a predisposing cause for the formation of stone in the substance of the kidney. I have not been able to find any observations which have been made on purpose to elucidate this point in the pathology of stone. While nar-

rowing, or malpositions of the urinary canals, whether congenital or otherwise, predispose to calculus disorders, it is not probable that they ever are the sole causes. Thus, in many cases of ureteral malformations, which cause hydrops of the kidney, there is no formation of stone, while in others, which are in every other respect similar, the presence of calculi makes a serious complication. Abnormalities in the chemical constitution of the urine undoubtedly play an important part in the origin of calculi; whatever disposes to a precipitation of the urinary salts when still warm and in the body would act as an efficient factor. Thus a relative disproportion in the amount of solids and water, or any condition which would make the solids less soluble, would favor the deposit of grit, and consequently the formation of stone.

Just what conditions affect the formation of the urine in this way are not positively known, but the fact that urinary stone is endemic in certain localities and comparatively rare in others indicates plainly that soil and climate and the composition of the drinking water have much to do with the occurrence of this kind of disease.

That nervous influences act upon the urinary secretion is well known, but it is nevertheless a problem why the destruction of the spinal cord in the thoracic region is almost always followed by the formation of stone in the kidney. The occurrence of foreign substances in the kidney is apt to be followed by the deposit around them of urinary salts. This will always be the case sooner or later unless they are washed out by the flow of urine. Dead epithelium, clots of blood, inflammatory exudate, pus, tumors, bacilli and parasites of all kinds

may form the nuclei around which calculi are built. For this reason, stone may result from injury, or from infectious diseases, like typhoid fever or gonorrhœa. In general, however, no one cause acts alone in the formation of stone. A nucleus, if present, may be carried away if the passage is large and unobstructed and the urine copious. If, however, in any part of the kidney a nucleus is lodged and the urinary passages are contracted or dislocated and the urine concentrated, a calculus will almost surely follow.

When a stone is formed in the kidney it begins, as a rule, to cause irritation of the surrounding tissue. The degree of irritation, however, will depend upon the hardness and roughness of the stone, its mobility and its location with reference to causing obstruction. An oxalate of lime calculus will cause more injury than one of uric acid or than a phosphatic stone. A stone that lies in the pelvis of the kidney and rolls around with every movement of the body will produce more trouble than an immovable calculus imbedded in the substance of the kidney; and one in the ureter more than one in the calyx. Occasionally stones are found in the kidney in post-mortems, which have never caused pain or trouble. The irritation may result in an abscess of the kidney or its pelvis, but it must not be forgotten that the existence of pus in the organ may be the forerunner and cause of stone, and not its effect.

The erosion caused by a rough, movable calculus may injure blood vessels and occasion serious, and even fatal, hemorrhages.

The frequent occurrence of stone in both kidneys may be due to the operation in both of the same influences. Ab-

normalities in formation may be common to both, and the same morbid quality of urine might also be common to both kidneys. There are, nevertheless, reasons for believing that in some cases, at least, calculus may result in one kidney from an irritation produced by a stone in the other. So, too, when one ureter is obstructed by a calculus, the reflex irritation caused in the other may induce a congestion with dangerous, or fatal, suppression of urine.

Among the symptoms caused by calculus in the kidney, or ureter, pain is usually the first that is noticed. The location and severity of the pain, however, differs widely in different cases. A calculus imbedded in the substance of the kidney may cause only a moderate degree of discomfort. Loose stones in the kidney pelvis cause pain that is aggravated by motion and jar. A stone impacted in the ureter produces an intense agony, which is afterwards increased by the distension of the renal pelvis by accumulating urine. The pain may be reflected and located by the patient, in the stomach, testes, penis, urethra, bladder, gall-bladder, appendix or other kidney. Percussion over the kidney may or may not elicit a sense of soreness. The vomiting caused may be as severe as that of any stomach trouble. If suppuration results there may be chills and fever. Pus will then begin to appear in the urine, which may besides contain crystals and earthy deposits.

The persistent irritation of stone in the pelvis of the kidney sometimes causes a hardening and thickening of the fatty capsule, which simulates a tumor. A movable stone, as it rubs against the surrounding tissues, may cause slight or serious hemorrhages. The microscope

will often enable us to detect blood corpuscles when the urine shows no albumen by chemical examination. The cystoscope will aid in the diagnosis when pus or blood is discharged from one or both ureters, and in women a sound passed through the ureter may sometimes detect a calculus high up in that canal or in the pelvis of the kidney. The X-ray may be brought into service and the shadow of the stone be made apparent to a skilled observer. In using the X-ray for this purpose the soft tube is preferred, as the light from the hard tube passes through all obstructions of calculus character. In using the X-ray the surgeon must bear in mind that hard metallic or stony substances in the liver, stomach, spleen or large intestine might seem to be in the kidney if they lay just before that organ. Finally, the reflex irritation caused by stone in the well kidney may result in a total suppression of urine, which, if not relieved, will be a symptom indicating speedy death.

When the symptoms are all present the diagnosis may be easy. In many cases the nature of the malady may remain obscure in spite of all of our efforts. We have to diagnosticate calculus in the kidney or ureter from ulcer of the stomach, gall-stones and inflammations of the gall-bladder, diseases of the spine, appendicitis, lead poisoning, maladies of the urinary bladder, and tumors and inflammations of or around the kidney. Where the evil is great, and all other means fail, an exploratory operation is justifiable. As regards treatment, it must, of necessity, vary with the case. If we are called to a person suffering from a first attack of renal colic, we must, first of all, relieve the agonizing pain by the use of opiates. I have not that dread

of opiates which some surgeons have, on account of their obscuring diagnosis. I do not think that any experienced man need mistake the quiet produced by the opiate for an improvement in the disease, whether that disease is due to renal colic, gall-stones, appendicitis, or obstruction of bowels, however much such conditions may puzzle the beginner. During and after such attacks the urine should be carefully saved and examined for sand or small calculi. If any concretions are passed, with a corresponding relief of symptoms, the diagnosis is established as regards that attack, and there will be henceforth a reasonable presumption that any succeeding colics with similar symptoms is due to the same cause. After such an attack the patient should be carefully examined with an X-ray, and such examinations should be repeated as often as the patient suffers from renal colic, or as long as a dark shadow in the picture of the kidney indicates the presence of a calculus in that organ. The examination should be made with a so-called "soft tube." If there should appear a large shadow, indicating a large stone, with symptoms of irritation and distress, an operation is at once indicated. If small shadows should appear in the picture, the surgeon should be more cautious. It is very easy, however, to mistake the import of what one sees in a skiagraph, the more especially if one makes his diagnosis beforehand. I had a curious example of that about six weeks ago, when a lad, who held his arm in an awkward position, was brought to me to be treated for a dislocation of the shoulder. Some very intelligent physicians had seen plainly the head of the bone in the axilla with an X-ray apparatus. There was no dislocation, and

under an anesthetic all stiffness and deformity disappeared. The lad, who had never had an injury, was suffering from an indioathic inflammation of the shoulder joint. It is dangerous, therefore, to accept the evidence afforded by the X-ray without further corroborating proof.

Before entering upon the surgical treatment, it is well to say a word about the medical treatment. It may be all said in a very small chapter. There is no remedy which will dissolve a calculus in the human body. If there is no stone, but a renal colic—which depends merely upon a urinary sediment—the ingestion of large quantities of pure water will tend to wash out the injurious particles by producing a copious flow of urine. The same good result may occur when free stones are small enough to pass out through the ureter.

It is probable that all the good which has been accomplished by mineral springs has been done in this way. As a means of prophylaxis, patients suffering in this way should have their diet and drink so ordered as to render the urine as normal as may be possible. Waters holding in solution large quantities of lime salts should be strictly forbidden. Every care should be taken to keep the digestion in the best of order and to regulate the functions of the skin. It ought to be thoroughly impressed upon patients showing a tendency to the formation of stone that nothing can ever give relief when a stone too large to pass the ureter has once formed, but a surgical operation. This is the universal experience of men who have made this subject an exact study. The question arises, whether we should always operate when a stone is discovered in the kidneys or ureter. I do not hesitate to say that

the answer should be a decided "Yes." Even though a stone imbedded in the kidney substance is for the present quiescent, it will be sure sooner or later to cause serious trouble. Unfortunately the question does not come to us in actual practice in that form. Practically the surgeon has to ask himself whether he shall operate in a given case in which the presence of stone is suspected but not proven. If we have a patient who suffers from attacks of colicky pain in the loin and lateral aspect of the abdomen, without any other symptoms whatever, shall we operate? And, if so, for what? And how? If the only symptom is an occasional hemorrhage from one or the other kidney, shall we then cut down and explore the kidney? Such are the forms in which questions occur to the surgeon studying over his individual cases.

We have to decide, in doubtful cases, with reference to the individual. If a man suffering from constant pain in the loin, or some other one symptom, is willing, after full explanations, to take the risk of an operation, of doubtful utility, it is right to make an exploratory operation when we should hesitate to urge it upon a patient who is timid and demands certain results.

The conditions which make operative measures imperative are: First. A suppuration of the kidney, with failing health, or a perirenal abscess. Second. Severe and repeated hemorrhages which threaten to destroy life and can be traced to one kidney. Third. Suppression of urine. Suppurations of the kidney due to the presence of calculi too large to pass through the ureter can be relieved only by incision, extraction and drainage. The incision should be made in the

loin, extra-peritoneal. The kidney should, if possible, be lifted out of its bed and stripped of the external capsule. If the stone can be felt in the pelvis, that structure should be incised. Through that orifice the ureter should be carefully examined, the kidney probed. The examination of the kidney when thus exposed, by means of the X-ray, would be of great assistance to the surgeon. It would enable him to determine positively whether other calculi existed in the organ and where they were located. If such should prove to be the case an incision should be made on the convex surface of the kidney, a little posterior to the middle line and parallel to its long axis. This cut is in the line of least vascularity, and will be followed by least hemorrhage. After extracting the stones the surgeon may either sew the kidney together or stuff its cavity with gauze until all bleeding has ceased. Where there has been no suppuration, the cut in the pelvis of the kidney, if closed by fine silk—which should not penetrate its walls—will frequently heal by first intention. When, for any reason, hemorrhage is to be feared, an elastic ligature may be temporarily passed around the pedicle and fastened with forceps, to be loosened after the operation has been done.

It may not be possible to bring the kidney to the surface, for the inflammation which has enveloped it may bind it down with hard cicatricial bands, exceedingly difficult, as well as dangerous to divide. The external capsule, too, may surround the organ in the form of a dense and adherent tumor of hard fat, making necessary a careful and tedious dissection. These cases often tax the ingenuity of the surgeon to the utmost.

The sudden suppression of urine, such as occasionally happens from calculus, and which may by reflex irritation affect the well kidney as well as the sick one, demands prompt measures.

Schede, in his chapter on stone in the kidney, speaks of men living several days with total suppression of urine, but advises not to delay action for more than forty-eight hours. My own experience is very different. I have had a number of cases after various operative procedures, and have never seen them live more than thirty-six hours after the symptoms first became manifest. There is no condition which, in my opinion, demands imperatively such prompt interference as this. The kidneys, in these cases, are prevented from exercising their function, by an enormous swelling and congestion. There is only one way of relief and that is the splitting of the internal capsule from one end to the other. Where suppression follows on stone, it is better to operate first on the diseased kidney and extract the stone. With the relief of this irritation the whole trouble may subside. If, however, that kidney should be found too diseased to warrant hope of relief, or if after twelve hours there is still no secretion of urine, the surgeon should delay no longer, but proceed to expose and operate on the well organ.

When a stone becomes lodged in the ureter it is generally, according to Israel, caught at the point where the ureter crosses the rim of the pelvis, and may often be detected there by rectal or vaginal examination.

The operation for such an impacted stone can usually be best conducted from the kidney pelvis. A sound introduced through the upper end of the ureter may push the stone into the bladder. If that

fails, the incision may be carried downwards, extra-peritoneally, and the ureter exposed. The calculus may then possibly be coaxed upwards into the pelvis of the kidney, and thence extracted. If that procedure also fails the ureter may have to be cut in the direction of its length and the stone taken out through the orifice. If possible the ureteral wound should then be closed with sutures, but the wound should, even then, be drained.

NEW GROWTHS OF THE KIDNEY.

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No other chapter of pathological anatomy is at present in such a confused and unsatisfactory state as that concerning renal neoplasms. The literature of the subject represents a transitional stage, the chapters treating of tumors of the kidneys in the majority of text-books being based upon the older clinical observations, which in the light of present pathological knowledge are practically worthless. Though numerous cases of kidney neoplasms have been reported since 1650, when the condition is first mentioned (*scirrhus*, *Sennert*), it is at this late day impossible to gather from the literature any satisfactory presentation of the subject. The earlier reports were chiefly case records of scanty nature; the growths were apparently without discrimination designated "renal growth," "cancer," "medullary," "encephaloid," "fungous hematomas," etc., with reference only to the most prominent gross characteristic of softness or

vascularity. Microscopical examinations were only rarely made before 1880. No attempt at differentiation was thought of; carcinoma and sarcoma were considered under one head "cancer," and from these early imperfect and often incorrect observations the majority of surgical and medical text-books of to-day base their generalizations and perpetuate dicta founded upon error.

It has been left to the pathologists of recent years to make careful microscopical study of renal growths, and by a scientific classification, based upon anatomical characteristics and histogenesis, prepare the way for a more rational clinical view. The paper of Grawitz in 1883, treating of adrenal inclusions in the kidney, may be regarded as epoch-making in so far as the pathology of renal growths is concerned. Grawitz claimed that a large class of renal neoplasms described under various heads as lipoma, myxolipoma, adenoma, adeno-carcinoma, etc., were in reality inclusions of adrenal tissue in the kidney (*struma lipomatodes aberrata renis*), and that these growths usually benign might become foci of development of malignant tumors. The great value of Grawitz's work lies chiefly in the extraordinary stimulus given by it to the study of the pathology of renal tumors, and since 1883 there has been a flood of literature bearing upon this subject. His views were soon confirmed by Chiari, Strübing, Löwenhardt, Beneke, Horn, Marchand and many others. They were attacked, however in 1892 and 1893 by Driessen and Sudeck, who rejected the theory of adrenal origin, the former regarding the growths as endotheliomata, the latter as renal adenomata. During the same years

Hansemann and Hildebrand upheld the endothelial origin of these tumors. Sudeck's paper was critically discussed by Lubarsch and Askanazy in 1894, these authors confirming the view of Grawitz. Since 1894 numerous papers have appeared in support of the theory of adrenal histogenesis for a large class of renal tumors (Ulrich, McWeeney, Jores, Lubarsch, Manasse, Gatti, Ricker, Kelly, etc.); and the term, hypernephroma, first used by Birch-Hirschfeld, has come to be the most commonly-accepted designation for this class of renal neoplasm. The direct and most important result of the discussion between the hypernephroma, adenoma and endothelioma schools was the tremendous impetus given to careful histological study of renal growths and the resulting attempts at a rational classification according to histogenesis.

In 1898 appeared Kelynack's "Renal Growths," the first reference book dealing exclusively with this subject. During the last several years an increasing number of cases have been carefully studied by pathologists, and the pathology of the subject has been brought much nearer to a satisfactory position. At the present time investigators are busied with the problems of histogenesis rather than with the general characteristics of renal growths, the latter having become relatively familiar. Until such histogenetic problems are satisfactorily solved it is clear that we can have no satisfactory working classification of the neoplasms of the kidney. The complex and as yet somewhat obscure embryology of this organ makes the problem a very difficult one. In attempting such a classification it must be borne in mind that it is only a temporary arrangement based upon our knowledge of to-day and by

the discovery of to-morrow subject to alteration. This condition, common to all branches of scientific investigation, must be especially emphasized with re-

gard to this subject. With such reservation, I offer the following classification of renal growths according to their histogenesis:

CLASSIFICATION OF KIDNEY NEOPLASMS.

KIDNEY NEOPLASMS.	1. Origin from Epithelium.	{ 1. Glomerular. 2. Tubular. 3. Pelvic. }	{ a. Benign. b. Malignant. }	{ Adenoma. Cystoma. Benign Papilloma. Carcinoma. }	
	2. Origin from Stroma.	1. Connective Tissues.	{ a. Capsular. b. Interstitial. }	{ a. Benign. b. Malignant. }	{ Fibroma. Fibrolipoma. Lipoma. Myxoma. Leiomyoma. }
		2. Endothelium and Perithelium.	{ a. Lymph-vessels. b. Blood-vessels. }	{ a. Benign. b. Malignant. }	{ Simple Sarcoma. Lymphangioma. Endothelioma. }
			{ a. Benign. b. Malignant. }	{ a. Benign. b. Malignant. }	{ Hemangioma. Angiosarcoma. Endothelioma. Perithelioma. }
			{ a. Benign. b. Malignant. }	{ a. Benign. b. Malignant. }	{ Lipoma. Leiomyoma. Rhabdomyoma. Hypernephroma. }
	3. Origin from Embryonal Inclusions, Wolffian Body, etc.	{ 1. Simple Teratoma. 2. Complex Teratoma. }	{ a. Benign. b. Malignant. }	{ a. Benign. b. Malignant. }	{ Rhabdomyosarcoma. Malignant Hypernephroma. }

OCCURRENCE.—By the majority of writers primary renal tumors are regarded as being of comparatively rare occurrence. The statistics collected by Kelynack in 1898 show percentages of occurrence varying from 0.19 to 4.6. Hansemann stands almost alone in asserting their relative frequency. In a recent article, "Ueber Nierengeschwülste," he declares that there is hardly another organ of the body in which tumors are of such frequent and manifold occurrence as in the kidney. He explains their apparent rarity by the fact that only comparatively few of the primary renal tumors give rise to clinical symptoms, the majority being insignificant growths, discovered only at autopsy. With reference to the relative occurrence of the different forms

of primary renal tumors, no reliable statistics exist at present. The statements found in the text-books regarding this point are for the greater part based upon incorrect diagnoses. By many writers it is stated that carcinoma is the most common renal neoplasm; in reality, it is of very rare occurrence, the mistake being founded upon the older clinical diagnoses by which the term cancer was indiscriminately applied to hypernephroma, adenoma and endothelioma. That kidney growths are relatively frequent is borne out by our experience in the University laboratory of pathology, where they were found in seven out of one hundred autopsies, in two cases the growth being the cause of death, the other five occurring as autopsy findings

without previous symptoms. Of these seven cases two were lipomata, one carcinoma and four hypernephroma. In addition to these autopsy cases five specimens of primary renal tumor have been sent to this laboratory for diagnosis during the last five years, one lipoma, one spindle-cell sarcoma, one malignant teratoma, and two hypernephromas.

TUMORS OF EPITHELIAL ORIGIN. Adenoma.—True adenomata arising from the renal tubules are rare, if the small adenomatous hyperplasias found in contracted kidneys are excluded. The latter are of the nature of a compensatory hyperplasia, and between them and the true adenomata no definite histological line can be drawn, as is the case with compensatory hyperplasias in other organs (cirrhotic liver). The true renal adenomata are small, rarely larger than a hazel nut, white or grayish, and are found in the cortex, usually in connection with the convoluted tubules. Only rarely do they reach a large size; not infrequently they become cystic. Many show a definite capsule of connective tissue sharply outlining them from the surrounding kidney parenchyma. The significance of the capsule is not clear; it may arise from the surrounding tissues as the result of inflammatory reaction, or if an essential part of the tumor the adenoma is to be explained as arising from an isolated anlage of kidney substance. Two histological varieties of renal adenoma are found, the simple tubular and the papilliferous. The cells lining the tubules or covering the papillæ resemble the epithelium of the convoluted tubules, and may occasionally be found to be directly continuous with the epithelium of one of these tubules. Usually the cells are somewhat flatter and lack the radial stri-

ation of the "Bürstensaum." About the adenoma the kidney substance is more or less compressed and presents the appearance of a primary contracted kidney. Clinically the adenomata are without significance; they produce no symptoms and are usually found only at autopsy. Retrograde changes may occur in them, and hemorrhage into the tubules is not infrequent.

Cystadenoma.—Cystic tumors lined with epithelium are probably the most common variety of renal neoplasm. They are usually small and often possess a capsule. Two varieties occur, the simple cystoma and the papilliferous cystoma (papillary cystadenoma, papilloma, etc.). The papilliferous form is the more common. The papillæ may be very thick and broad, or very fine and narrow, and often so interlaced that sections of the growth appear as an adenocarcinoma or adenoma, the cyst space being obliterated by the papillæ. The latter form is very likely to become carcinomatous, often reaching a large size, breaking through into the veins and setting up metastases. The papillæ of both varieties are covered with flattened, cubical or low columnar epithelium. Retrograde changes, such as fatty and mucoid degeneration, necrosis, hemorrhage, etc., are of frequent occurrence. The origin of the cystadenoma may be either from simple retention cysts or simple adenomata, the dilatation of the tubules of the latter by secretions being followed by hyperplasia of the elements forming their walls. Transition forms may be found, and it is possible to trace all stages of development from simple adenoma through the papilliferous form to adenocarcinoma. The adenocystomata of the kidney show striking analogies to those

of the ovary. The smaller renal cystadenomata are unimportant clinically, as they give rise to no symptoms. The larger malignant forms are to be classed with the carcinomata.

Carcinoma.—True carcinoma arising from renal epithelium is rare, the great majority of cases recorded in the literature as renal cancer being undoubtedly hypernephromas, sarcoma or adenoma. In the great majority of cases of renal carcinoma the tumor takes its origin from the epithelium of the renal tubules, or from the epithelium of a papilliferous cystadenoma (malignant papilliferous cystadenoma). Adenocarcinoma is probably the most common variety, medullary second in frequency, scirrhus and colloid rare. The growth may be circumscribed or diffuse. In the former variety, no matter how large the cancer mass, some remains of kidney tissue may be found forming a capsule about it. The diffuse cancer is more rare, it is usually scirrhus; the kidney may retain its characteristic form, even though three times its normal size. On section the appearance is that of a primary contracted kidney, the outlines of kidney tissue being destroyed. Microscopically the entire tissue is carcinomatous, very few remains of glomeruli and tubules are found. Both circumscribed and diffuse forms may extend into the pelvis as polypoid growths, which may break through the capsule and invade neighboring tissues. Necrotic changes, hemorrhage, etc., occur as in other carcinomata. Only three cases have been reported of primary renal cancer arising in the glomeruli, those of Abram, Hildebrand and Sharkey. In Abram's case the parietal layer of Bowman's chamber was covered with several layers of deeply stained columnar cells,

metastases were present in the liver, bones, etc. It is probable that some congenital anomaly played a part in the development of this most interesting condition. Squamous-celled (cancroid) epithelioma has been reported a few times as arising from the epithelium of the kidney pelvis, but these cases are of somewhat doubtful nature. In all forms of renal cancer metastasis is of frequent occurrence, being found most often in the lungs, owing to the tendency of the growth to invade the renal vein and ascending vena cava. Except in the case of the papilliferous adenocarcinoma rupture through the fibrous capsule, is very rare.

TUMORS ARISING FROM STROMA. Benign Connective Tissue Growths.—These are of relatively rare occurrence in the kidney. They are usually small and only rarely are of clinical importance. *Fibroma.* These are usually found as small grayish-white bodies of the size of a pin-head or pea, in the cortex, arising from the capsule or just beneath the capsule, in the interstitial tissue of the parenchyma, or more commonly in the base of the medullary pyramids. They are harder, more circumscribed and more glistening than tubercles for which they may be mistaken. In very rare instances they may reach a very large size, one weighing 37½ pounds having been reported. They may be single or multiple, and are usually encapsulated. Histologically they consist of fibrous connective tissue which is often mixed with large spindle cells resembling unstriated muscle. By many writers these are regarded as *fibromyomata* analogous to uterine fibroids. The smaller fibromata of the kidney are probably for the greater part of cicatricial origin. Myxomatous and cystic degeneration and calcification

are of frequent occurrence in the larger growths. *Lipoma*. The renal tumors composed of true adipose tissue are usually of small size and are most commonly found beneath the capsule. They are often multiple. Many of them are to be explained as congenital inclusions of the fatty capsule; others undoubtedly arise from fibromata (*fibrolipoma*) or from the connective tissue around the larger blood vessels. Only rarely do they become large enough to excite symptoms sufficient to call for operative interference. In one remarkable case reported by the writer a fibrolipomatous growth weighing two pounds was found as a large lobulated mass filling up the greatly-dilated pelvis of the left kidney and sending a prolongation of tumor tissue down into the distended ureter. The only remains of kidney tissue were found in the thin capsule covering the growth. *Myxoma* is of very rare occurrence in the kidney, but both the fibroma and fibrolipoma may undergo myxomatous change (*myxofibroma*, etc.). The significance is the same as in the case of the fibroma and lipoma. *Osteoma* and *Chondroma* have been reported as occurring in the kidney but it is probable that these growths were of teratoid nature. *Leiomyomata* occur as rare tumors of the kidney, arising either from unstriped muscle of the capsule or blood vessels. They may be multiple or single. The unstriped muscle may be mixed with connective tissue (*myofibroma*) or fat tissue (*leiomyolipoma*). These growths may be explained as arising from congenital inclusions of capsular anlage. *Lymphangioma* is of very rare occurrence in the kidney (*lymphangioma cysticum*). The *Hemangioma cavernosum* is more commonly met with in the form of dark-red encapsulated masses varying in size from a pea to a

hen's egg. They are found underneath the capsule or in the upper part of the medullary pyramids. They are identical in structure with the cavernous angiomas of the liver, though many of them appear to be rather of the nature of local capillary dilatations than true tumors. All stages of this capillary dilatation may be observed.

MALIGNANT TUMORS ARISING FROM STROMA. *Sarcoma*.—The simple sarcoma arising from the kidney stroma is of much more rare occurrence than carcinoma of the kidney. The majority of renal growths usually considered as sarcomata are mixed tumors and should be classed with the malignant teratomata. The simple sarcomata are usually spindle celled, though the round celled variety has also been observed. They form diffusely-infiltrating growths, only rarely are they nodular. Portions of kidney tissue apparently normal may be found throughout the tumor mass. The growth may take its origin from the capsule, interstitial substance of the parenchyma or from the pelvis. The growth is usually very rapid, and the tumor quickly undergoes degeneration and necrosis as in the case of carcinoma. The spindle cell variety is of slower growth than the round cell. On cross-section many of the growths show a much variegated surface due to hemorrhages, degenerations, etc. Many of the renal sarcomata are *Angiosarcomata*, arising either from the endothelium or perithelium of the vessels. These tumors are characterized by an alveolar arrangement, cords or cylinders of cells being grouped around ectatic blood vessels, the tumor-cells forming the wall of the vessel. The cells of these growths are usually spindle shaped. The growth usually undergoes rapid necrosis, owing to the obliteration of

the vessels through cell-proliferation, so that often the only living portion of the tumor is found at the periphery, the central portion being entirely necrosed. Metastasis of renal sarcomata is less common than in the case of carcinomata, though invasion of the renal veins by sarcoma is as common an event as in carcinoma.

TUMORS ARISING FROM EMBRYONAL INCLUSIONS. *Simple Teratoma.* *Dermoid Cysts* of the kidney have been reported, but are extremely rare. As stated above, the *Fibroma*, *Lipoma* and *Leiomyoma* may be explained as heterotopic inclusions of capsular anlage. Simple inclusions of striped muscle may also occur (*rhabdomyoma*). But by far the most common and important of the simple teratomata and one of the most common renal tumors is the *hypernephroma*, a growth consisting of tissue resembling adrenal structure (*struma lipomatodes aberrata renis*, "adrenal rest," etc.). The close relationship between the early stages of embryonic development of adrenal and kidney makes possible the occurrence of such inclusions. The adrenal may sometimes be entirely or for the greater part included beneath the kidney capsule. "Adrenal rests" usually appear as round, white or yellowish masses resembling adipose tissue, encapsulated and sharply outlined from the surrounding kidney tissue. They are usually located in the cortex just beneath the capsule but may occur in any portion, even in the medulla. Microscopically, they consist of a fine stroma containing a net-work of capillaries in the meshes of which cords or strands of cells resembling adrenal cells are present. These cells may be round, polygonal or even columnar, they contain fat and glycogen droplets, a great individual variation is seen, but on the whole the cells resemble those of the adrenal

cortex, particularly those of the glomerular zone, only rarely are they like those of the medulla. The nucleolus has a metachromatatic character, staining differently from the nucleus. Hypernephromas are rich in lecithin, in this respect resembling also adrenal tissue. The growths arising from them appear to be identical with those primary in the adrenals. Like these they may be benign or malignant. They show a tendency to penetrate early into the veins and to give rise to metastases. They show the same necrotic changes seen in the adrenal tumors, and like the latter often form pseudocysts filled with brownish pultaceous material, the only living portion of the growth being at the periphery. Giant cells similar to those in the adrenals are often present. No transition forms between renal tissue and these tumors are ever found. The close relationship of the cells to the capillaries, the tumor cells resting directly upon the endothelium, has led many writers to class these growths with the endotheliomata or peritheliomata. By other writers they are regarded as adenomata derived from the renal tubules. At present they are best classed as teratomata, the majority of authorities agreeing in considering their origin to be from embryonal anlage, either adrenal or from remains of the Wolffian body. Though the great majority of hypernephromas are benign, being found only at autopsy, they very frequently become malignant, giving rise to metastases, chiefly in the lungs. It cannot be denied that all of them have malignant potentialities.

Complex Teratomata.—The complex growths containing cartilage, bone, muscle and nerve tissue are to be classed in this group. While the origin of these interesting growths is not as yet definitely

ascertained they are clearly of teratoid nature. They may arise from Wolffian "rests" or from earlier embryonic structures. Clinically, they appear as sarcoma and are usually designated "*mixed sarcoma*," or "*embryonal adenosarcoma*." They occur nearly always in children and are to be regarded as congenital growths. Only rarely have they been found in adults. They may grow slowly or rapidly, the gross appearance is very varied owing to the many degenerative processes that may be present. Often they reach a very large size. They are usually sharply outlined from the kidney tissue which is pushed aside and through pressure becomes atrophied rather than being directly destroyed. The microscopical picture is very complicated. Granular structures resembling kidney tubules are found, between these a stroma made up of round or spindle cells, containing striped and unstriped muscle, islands of bone, cartilage or myxomatous tissue, ganglion cells or neuroglia. The presence of striped muscle forms one of the most striking features of these growths and they are frequently called *rhabdomyosarcomas*. The presence of the muscle is variously explained as derived from the Wolffian body or the primitive myotome, or as a metaplasia from unstriped muscle. The mixed character of the tumor has often led to the diagnosis of carcinoma. As true renal carcinoma or sarcoma is very rare in early life, it may be taken as a principle that the malignant renal growths of children are of the nature of malignant teratoma. Metastasis from these growths may occur early, usually into the lungs. They are more often of simple sarcomatous nature, and rarely show the mixed character of the primary.

SECONDARY GROWTHS OF THE KIDNEY.—Both carcinoma and sarcoma may appear in the kidney as metastatic growths from primaries situated elsewhere in the body. Secondary carcinoma is often multiple, and forms round nodules in the cortex, most frequently in the glomeruli, the metastasis being hematogenous. The microscopical structure corresponds to that of the primary. Secondary sarcoma forms round nodules in the cortex, usually multiple, the number of secondaries being sometimes very great. Retrograde metastasis of either sarcoma or carcinoma into the kidney may occur through the renal veins from the inferior vena cava. In such cases the secondaries are most often found near the kidney pelvis.

DIAGNOSIS.—Renal growths often produce no symptoms at all. The most characteristic signs are the presence of a tumor in the right or left lateral regions displacing the colon forward and inward. Such a tumor may be caused by a growth of the adrenal, kidney, Wolffian body or perirenal tissues. The outward displacement of the colon is a rare exception. There may be fluctuation. When this is present aspiration for diagnostic purposes is indicated. It must be remembered that lipoma and myxoma may give fluctuation and yet yield no fluid on aspiration. A cystic tumor filled with brownish pultaceous material is indicative in the great majority of cases of hypernephroma. Of the urinary signs hematuria and the presence of bits of tumor tissue in the urinary sediment are the signs of most vital importance. In suspected cases the urine should be centrifugated, the sediment fixed on cover-glasses by the alcohol-ether method, stained with hematoxylin and eosin, and

examined for mitotic figures. The presence of numerous mitoses, particularly of atypical forms, may be taken as strong evidence of the existence of malignant growth of the urinary tract.

PROGNOSIS.—This depends upon the pathology of the growth. It is favorable in the case of the benign connective tissue tumors, the encapsulated adenomata, benign papilloma of the pelvis, the majority of hypernephromas, less favorable in the case of sarcoma and carcinoma without metastases or extension, wholly unfavorable in the case of the malignant teratomata and carcinoma and sarcoma with metastases. Secondary cancer and sarcoma of the kidney are likewise hopeless.

TREATMENT.—This is, of course, surgical. Modern pathology has, however, produced great modifications, and the successful treatment of renal growths depends largely upon their pathological nature. Surgical interference is especially indicated in the case of hypernephroma. Small growths of this nature may be resected. As hypernephromas were formerly classed to a great extent with the carcinomata or sarcomata, the prognosis in general of renal tumors has been greatly modified. In the case of sarcoma and carcinoma the lymph glands in the neighborhood of the kidney hilum are to be removed in connection with the entire organ.

A charter has been granted to the Bay County Medical Society, which was recently organized. The following officers were elected: V. L. Tupper, President; E. A. Hoyt, Vice-President; M. Gallagher, Secretary; C. H. Baker, Treasurer. All these are Bay City men.

ACUTE KIDNEY INFECTIONS.

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It may be well to state at the outset that this paper consists of a compilation of the writings of others, which I have been able to cull from different books and magazines, and to that extent expresses the recent thoughts upon this obscure subject. As the title indicates, we are not to consider those inflammations of the kidneys caused by irritant poisons as mercury, etc., perhaps not even those following exposure to cold and wet, although the manner in which nephritis is produced in these cases is not fully understood. Only those conditions directly or indirectly bacterial in origin will be considered. Between these direct and indirect effects it is at present impossible to discriminate; even when the organisms have been proved to pass through the kidneys, escaping with the urine, the role played by the organism itself cannot be sharply differentiated from that of the toxic products of its life activity.

In the infections of the kidney there may be involvement of the kidney substance proper (nephritis), of the mucous membrane of the pelvis of the kidney (pyelitis), or of the capsule and the peripheral portion (perinephritis).

We will deal with the first alone. For convenience a classification may be made into:—

- 1st. Primary infectious nephritis.
- 2nd. Acute nephritis secondary to an infectious disease.

It must be understood, however, that no attempt is made to draw a sharp line of distinction. In the first class may be grouped those cases in

which the kidneys are the seat of inflammatory changes, caused by micro-organism carried by the blood current, whose point of entrance to the system cannot be definitely traced. Kertz observes that the invasion of the blood by disease germs may assume various clinical aspects. In one form the blood may become infected without an initial local effect, as in malaria and relapsing typhus. In another form there may be typical infection of the blood from a local point of invasion, as in anthrax and typhoid fever. The germs may be carried into the blood by the leucocytes, as in gonorrhœa and probably also in lepra, or swept into the lymph current, as in infection from strepto, and diplo-cocci, or penetrate through some vascular lesion, as in tuberculosis or plague. The invasion of the blood may be secondary to another infection, as in small-pox, measles or scarlet fever.

Many organisms have been found in these cases, most frequently streptococci and staphylococci, the former being sometimes present in enormous numbers in the kidney tissues. From a series of eleven cases, in which streptococci were found in the urine, Mammaberg succeeded in isolating an organism, which produced an acute hemorrhagic nephritis when injected into the circulation of the lower animals. The association of acute interstitial nephritis with acute infection suggests a microbic origin, but bacteriologic examination has, for the most part, proved negative. Thus of twenty-four cases of diphtheria, six were sterile, in eleven the colon bacillus, in one the staphylococcus aureus, in five the streptococcus, in eight the diphtheria bacillus, and in one the bacillus *foetidus*, were found. In five cases of scarlet fever the

colon bacillus was found in two, the streptococcus in three, and the staphylococcus in one. In eight cases of mixed infection of diphtheria with scarlet fever or measles the kidney was sterile in two, the streptococcus and colon bacillus being found in the others. Not much weight can be given to the colon bacillus in these cases upon post-mortem examination, and as for the other bacteria, they are found in the kidney in the same proportion in cases in which the lesions of acute interstitial nephritis were absent.

But the great majority of the cases of acute kidney infection will fall under the head of the second class, viz., acute nephritis secondary to an infectious disease. Any of the infectious processes which tend to the production of the general diseases or to the formation of metastatic foci, may result in inflammatory changes in the kidney, even when the original disease has been mild or abortive in character. Generally speaking, however, much depends upon the severity of the original infection. The cases of typhoid fever, small-pox, erysipelas-septicæmia, etc., in which acute nephritis develops, are usually very severe, and when a fatal termination occurs, the influence the nephritis has exerted in producing this result cannot be accurately weighed. In all of these infections, except scarlet fever and diphtheria, acute nephritis is an occasional complication and must be watched for and guarded against, but figures as to the relative frequency of its occurrence give no results of any special value. But in scarlet fever and diphtheria it presents itself with such frequency that statistics are of considerable interest. Thus in 4,343 cases of scarlatina recently reported in American and for-

eign literature, acute nephritis developed in 359, or 8.3 per cent. In only a portion of these cases was the proportion developing uræmic noted. From these figures it would appear that uræmia occurs in about 13 per cent. of the cases of scarlatinal nephritis, and that the mortality in the uræmic cases is over 50 per cent. How large a part nephritis plays in the fatal issue of scarlet fever may be inferred from the report of Jaeger, who found severe nephritis manifest, microscopically, in 21 out of 47 autopsies in scarlet fever cases, or 44.6 per cent.

The appearance of the kidney in scarlet fever varies with the stage of the disease. In patients that have died early the kidney presents very slight microscopic changes, but microscopically exhibits degeneration of the epithelium of the convoluted tubules. If death has occurred at the height of the disease, the kidney is usually enlarged, flaccid, and either pale or red from hemorrhages and congestion (the flaccid large white kidney and the flaccid large hemorrhagic kidney of Friedlander).

The most frequent type of nephritis in scarlet fever is that known as post-scarlatinal nephritis; this is, as a rule, a glomerulonephritis. In some cases interstitial changes are found, congestion of the vessels and fatty degeneration of the epithelium are present in practically all cases; glomular lesions are, however, not a necessity, and were absent in a series of cases studied by Pearce (Hektoen). After diphtheria, nephritis is seen in about six per cent. of all cases, and is a most serious complication; out of 69 cases reported by Heinze, 48 died, nearly 70 per cent. Jaeger reports 28 cases of severe nephritis in 615 diphtheria autopsies, or 4.5 per cent., a striking contrast

to his figures in scarlet fever given above. The renal changes in diphtheria are not characteristic. Degenerative changes in the epithelium are always present, frequently with more or less pronounced alteration in the interstitial tissue (accumulations of plasma cells), and in the glomeruli. Glomerulonephritis is especially common in older children and in cases of prolonged duration. The lesions are not due to the bacteria, but to the toxic substances in the blood. The diphtheria bacillus may, however, be present in the kidney or culture (Hektoen).

The figures given above are apart from the transient albuminuria, which is seen in any of the severe infections, especially when accompanied by high temperature. In these cases there is present what has been described as acute parenchymatous degeneration of the kidney, due, undoubtedly, to toxins, altered products of metabolism and prolonged high temperature. This condition is the rule in typhoid and yellow fevers; is very common in scarlet fever, where it occurs in from 20 to 90 per cent. of all cases, according to various authors; in smallpox and diphtheria, and in severe cases of influenza, where the proportion ranges from 35 per cent. (Senator) to 85 per cent. (Brands). In the other infections it is less common, but by no means rare.

The conditions which predispose to the development of a secondary nephritis are varied and but little understood. Taking scarlet fever as an example, the percentage of cases complicated by nephritis varies enormously in different epidemics; in some it may be but two or three per cent., while in others it may be forty or fifty per cent, the average being probably between four and ten per cent. While it is most common after a severe

infection, it may follow a very slight one. The intensity of the eruption is no index, for it may occur where the eruption has been very limited or absent. Chilling of the surface may induce an attack, but in many cases this has not occurred. The too early use of solid foods is often responsible for the condition, and perhaps to greater care in this respect is due the decrease in the percentage of cases which some writers have noted in recent years.

As scarlatina and diphtheria, the most frequent causes of acute nephritis, are more prevalent among children, it follows naturally that the condition is seen more often among the young. It is worthy of mention that in twelve cases of acute nephritis following influenza, collected from the literature by Freeman, eight were under 18 years of age. However, no age is exempt.

The greater exposure to which adult males are subjected may account for the greater frequency with which they are attacked, but this would hardly apply to children, and with them also the males show a higher percentage of cases of renal involvement in many epidemics.

SURGERY OF THE KIDNEY IN TUBERCULAR CONDITIONS.

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Of the route by which the bacillus tuberculosis finds ingress to the kidney, I shall have but little to say; though personally I think it to be through the lymphatics. That it does occasionally find its way to and make its habitat in this organ, has been demonstrated many times. Fortunately it is unusual for both kidneys to be affected at the same time,

thus making it possible, where but one is involved, to remove it and frequently restore the patient to permanent health, or at least give an indefinite extension to his lease of life. But the object of this paper is more a study of the operation and its technique than it is one of pathology.

Two years ago, at the meeting of the American Medical Association at Atlantic City, the last day of the sessions and the last end of the last hour in the surgical section, as the chairman's gavel was about to announce the final adjournment to the dozen or fifteen faithful ones who had sat through the entire session, Dr. Howard A. Kelly, of Baltimore, Md., came hurrying in accompanied by two or three assistants, and asked permission to present to the section before its adjournment an interesting case and exhibit a pathological specimen illustrating his operation for removal of the kidney and ureter. His request being granted, the specimen was shown and proved to be a kidney and ureter entire, with section of bladder containing urethral implantation.

Dr. Kelly gave the following history: Patient, lady of about twenty-one or twenty-two years; complained of severe urethral irritation, with much pain on micturition; had been treated by several physicians with no relief. Dr. Kelly made a diagnosis of tuberculous kidney, and by catheterization of the ureters located all the trouble on one side, I think the left. At the operation which followed he not only removed the affected kidney, but the entire ureter, including a section of the urinary bladder surrounding its implantation, and closed the bladder with his double row of sutures.

He gave as his reasons for removing so much, a desire to take away all, or as much as possible of the diseased tissues, in order to more surely prevent return of the tubercular trouble. After the operation he was called to Boston and was absent from Baltimore something over three days. On his return he found his patient dead. The doctor stated that he regretted exceedingly the fact of his being called away at that particular time, as the autopsy showed that the suturing in the bladder had given away, allowing the urine to escape, inducing toxemia and death, which he thought might have been averted had he been there to reopen the wound and again suture the bladder.

The above case, reported as it was, the last thing before adjournment, received no discussion. I have always marveled at the temerity shown in this operation, and wondered why it was necessary to remove so much, in fact, why open the bladder at all? And above all, why leave the patient so long without a competent surgeon on the ground with full authority to reopen and repair any damage that might take place?

Through the kindness of Dr. T. E. Sands, I have been privileged to operate on two similar cases of tuberculous kidney. No. 1: Patient, a young married woman of about twenty-one or twenty-two years. Much emaciated. Dry yellow skin, with cilia pointing forward; was passing purulent urine, had mid-day chills, followed by fever and night sweats, irritable, peevish and fretful. Urethral meatus red, swollen and very sore, causing excruciating pain on micturition. Pus found only in urine from right ureter. Temperature at time of operation 103, pulse about 120. Kidney and ureter to

within about one inch of the bladder was removed. Patient made a perfect recovery, is still living and in excellent health.

Case No. 2: Patient, a lady about forty-two or forty-three years of age, presented practically the same symptoms as No. 1, with same redness, swelling and irritability of urethra. Trouble confined to one kidney, which, with most of the ureter, was removed. A slow but perfect recovery followed, and now after an elapse of about four years both patients are enjoying excellent health.

The epithelium of the ureters, bladder and urethra, being of the transitional variety and four layers in thickness, is so arranged as to *keep out or prevent* absorption. This is a wise provision of nature to prevent re-absorption of urine (an excrementitious substance) which comes in contact with or passes over these membranes. With this arrangement of epithelium, and the reason for it so evident, it becomes an interesting question to ask, what probability there is for the bacillus tuberculosis to pass through these four layers, and gain admission to the general systemic circulation? And is that probability sufficiently great to warrant the additional risk incurred by opening the bladder to remove another inch or two of the ureter, when the *bladder* and entire *urethra* (which of course cannot be removed) have been exposed to the action of the germs equally as much as the ureter itself?

In neither case reported by me was there soreness or inflammation inside the urethra or bladder, but only at the urethral meatus, which was red, swollen and irritable at the point where the mucous membrane unites with the skin, and this soreness extended out on the skin a short distance, but all cleared up and became well when patients recovered from their nephrectomies.

Discussion

HENEAGE GIBBES, DETROIT.

In regard to new growths in the kidney, I have had some interesting points in recent cases. We find it stated by good authorities that in some of the large tumors, involving the kidney, supra-renal tissue is sometimes found. This is undoubtedly the case, and I would go farther and say that some of these large tumors are entirely composed of supra-renal tissue. Several years ago, in 1883 I think, I discovered a number of accessory adrenals in the connective tissue surrounding the kidney, and some were of considerable size. From observations I have made on these accessory glands I am inclined to think that they are more prone to hypertrophic growth than the true supra-renal. These large growths involve and sometimes destroy the kidney; they are made up of cells in masses, which are polymorphous, and cells in a more or less tube-like form, and here the cells are distinctly columnar. This is practically the structure of the accessory adrenals, as they are not so highly differentiated as in the true organ. As civilization advances we may find it necessary to remove these accessory glands with the vermiform appendix in children as regularly as we have them vaccinated.

In regard to adenomata of the kidney, I think the term is somewhat loosely used. If we examine a growth and find it consists of large cells on a delicate basement membrane, with fine papillæ projecting into the cavities, also covered by the same cells, we may conclude that it is an adenoma gone back more or less to developmental conditions, especially as we find identical growths in the uterus. But when we find large cells piled up irregularly two or three or more deep on the basement membrane, without any papillary ingrowths, I think we are approaching perilously near carcinoma. In some cases I have traced these cells to those of the convoluted tubes; that is, I have done this as certainly as it is possible to. I have more than once read papers describing sarcoma of the kidney in the new-born and afterward obtained a portion of the growth for examination. Some of these cases are not sarcoma at all, but consist of a combination of the Wolffian body, with true kidney, and represent the appearance of the organ about the sixth or seventh week of intrauterine life. They consist of cysts with very delicate walls, having a beautiful arrangement of flat nucleated cells on a homogeneous basement membrane; in some, glomeruli can be made out, and in others there is some appearance of kidney tissue. They are examples of arrested

development. These cases have also been called carcinoma. Cystic change may commence in intra-uterine life and be continued after birth for many years, the kidney reaching an enormous size. In these cases there is no malignant growth and normal kidney tissue exists in the small amount of solid tissue between the numerous cysts.

E. B. SMITH, DETROIT.

The papers have been good and they have brought out some practical points. A point made by one of the speakers was one that I intended to make, but I also wish to make an additional point on the same line, and that is this, we have not only tuberculosis of one kidney, but are apt to have tuberculosis of the other, a malignancy of one kidney and a malignancy of the other; also with sepsis of one kidney we are very apt, if it becomes of chronic duration, to have sepsis of the other. Now, if that is so, then the question comes down to a practical one: We should make our diagnosis as quickly as possible, as early in the disease as possible, and an examination helps us make the diagnosis. In other diseases, diseases of the abdomen, or any lesions or any of the different manifestations in the abdomen, we open the abdomen and make an exploratory incision. Why not do it here and just the same? I have found when I had a case of stone in the kidney that I have been able to make, or rather to confirm my diagnosis of stone in the kidney, by placing the patient in a proper position and by double manipulation, by palpating with one of my hands upon the back and the other hand upon the abdomen, getting the kidney between the two hands and rotating it, or passing it from one hand to the other; the patient then if you talk to him will complain either at the time or afterwards of certain pains, reflex pains that you can get no other way. I think in two cases I have been able to confirm the diagnosis in this way.

I do not think we are quite particular enough about sounding the ureters. In two cases at St. Mary's Hospital I have been able to find pus by catheterizing the ureters, and I have been able to dilate the ureters in one of the cases; in another case I have been able to locate the obstruction, and finding it, relieve the conditions without an operation. I think we should catheterize the ureters and do it frequently; it is a procedure that is easily done, after you have done it once or twice with one or two different patients; sometimes you will find one that is very easy, and the next patient you attempt it upon you have to make the attempt two or three times before you are able to do it; any of us ought to be able to catheterize the ureters with a little practice, and

then you can tell what you have and which kidney is involved; after you have found pus at different times, and are unable to relieve the condition, you are justified in cutting down and making an exploratory operation, and if it is tuberculosis, a new growth, or a stone, then you can proceed with your operation—an extra peritoneal incision does no harm. I have been unable in one case to locate stone in the kidney by repeated punctures; I knew the stone was there, it was located for me, yet I was unable by using a small fine instrument to strike that stone. Upon the other hand, I had a case in which the calculus was in the urethra; my sound passed that calculus at three different sittings, and yet the operation revealed a calculus; it was fusiform in shape. We may dilate the urethra as large as a small finger to allow the urine to pass. I urge that we make examinations of the ureters, by catheter, and sounds, and if no calculus or stricture be found, would advise exploratory incision.

F. W. ROBBINS, DETROIT.

I want to make reference to a few points, and the first is the interesting fact that there may be localized tuberculosis in the genito-urinary organs without systemic infection, and this is nicely brought out where, after operation and removal of a tuberculous kidney, the patient seems to recover perfect health. We know where there is localized tuberculosis it must come through a general infection, but the general infection is probably localized on account of some local congestion or injury to some local part. Where the tuberculosis has settled in the testicle, and that has been removed, the body itself is able to take care of the few floating bacilli that may be existing in the blood. This being so, when we have a case of probable tuberculosis localized to parts that can be removed, it seems to me right that we should remove that local part, believing that the tuberculosis has not become general, and the localized infection being removed, the patient has a fair chance to recover permanent health.

Another case that I wanted to refer to in relation to stone in the kidney and the ureter was that of a case reported by Dr. Kelly a week or two ago, which is of interest on account of the fact that the stone was one-half within the bladder and one-half within the ureter; the stone was an inch and a half or two inches in length, protruding into the bladder, and was so large that he was not able with forceps to break it up, and the method that he employed was this: Using a knife with a blade nearly at a right angle to the shaft, he passed this knife into the vagina, to the cervix, and directly through into the bladder, cut-

ting down an inch and a half, and then removing the stone through the vaginal route, being able in that way to get at the ureter with perfect ease.

Another thing that I wish to refer to is the remarks made by Dr. Smith in speaking of ureteral catheterization: If he means to say it is easy in women, that is true; if he means to say that ureteral catheterization in a male is easy, he is mistaken; they can be catheterized in many cases, but there are cases where you cannot catheterize the male ureter. In cases where the prostate is enlarged, drawing the bladder up and forward, pulling the ureter down and forward, so that the ureter cannot be seen, a ureteral catheter cannot be entered.

P. M. HICKEY, DETROIT.

In listening to Dr. McGraw's interesting and valuable paper, I was particularly impressed with the one statement which the doctor made in regard to the use of the x-ray in the diagnosis of renal calculi, namely, the necessity of a proper interpretation of the skiagraph. This is a point which I think should be emphasized. Some discredit has been thrown upon the x-ray by different writers and every once in a while we hear some caustic remarks about the so-called fallacy of the x-ray. In those cases where I had the chance to investigate the cause of such remarks, I found that the fault was in the observer, who failed to appreciate the values of the shadows depicted. In work with the microscope, ophthalmoscope, spectroscope, or other instruments of precision, it is necessary that the observer master the technique of the instrument and acquire a certain experience before his opinion is of value. The same need of experience is necessary in the interpretation of what is seen with the fluoroscope or in the skiagraph. It is necessary to always bear in mind that when working with the x-ray that we are working with shadows and to constantly consider the conditions which may be present to cause such shadows. If this point is borne in mind. I think that there would be very little criticism and few remarks in regard to the fallacy of the x-ray.

With regard to the future value of the x-ray in the diagnosis of renal calculi, it seems very probable that the technique will be perfected and the corresponding results will be much more valuable. Some of the work which has been done by a few men in this country, both in the diagnosis of renal and biliary calculi, is certainly most promising.

J. H. CARSTENS, DETROIT.

I am glad Dr. Hickey mentioned that about the radiograph. We are often disappointed in these pictures, and perhaps it is the fault of the

men who handle the apparatus; they have not the practice. The thing is in the development stage, and probably in the course of time we will be able to do more with the pictures.

The paper of Dr. McGraw suggested a large number of points on the diagnosis that I wanted to mention. Some time ago I had the queerest kind of a case of stone in the kidney; a doctor brought the patient to me and said he had stone in the kidney; he had I don't know how many attacks, and it was the clearest kind of a case; the symptoms were there, pain in the testicles, and everything else, and so I proceeded to operate, but I could not find any stone; there wasn't any there. I followed it up; it was on the right side, until I came to a place where there was an enlargement, and on careful examination I finally found that that man had appendicitis. There had been an inflammation of the appendix, it had become adherent over the ureter and formed cicatricial tissue that had contracted, and with occasionally a spasmodic contraction, produced all the symptoms of stone in the kidney.

Sometime afterwards I had a case almost identically like it, but that time I was on the lookout; I was suspicious of it, and I found another case where the appendix had grown over and become adherent over the ureter. So it is something to bear in mind in stone in the kidneys, that sometimes we make mistakes. Sometime ago I had another case where I was sure I had a stone in the kidney. I had been written to by a doctor in Canada that a woman had stone in the kidney, and on investigation I thought she had stone in the kidney, but the radiograph did not show any; the woman was suffering a great deal and I made an exploratory operation, and what was worse in this case I could not find even the kidney. I cut down at the usual place and found upon going down further the rim of the pelvis, and what I found was a congenitally deformed kidney, a small irregular shaped body, and I removed it with a great deal of difficulty; the anatomical landmarks were gone. Somehow or other there was an accumulation of urine occasionally that produced the symptoms of nephritic colic. So the diagnosis is by no means easy, but still I think in these cases it is perfectly justifiable to do an exploratory operation, find whatever you can, and act accordingly. The diagnosis of kidney stone I think is difficult; we do not have very many cases in this country anyway, not so many as they have in England.

J. C. WILSON, FLINT.

I wish to say a word upon this subject, inasmuch as I have had some experience with patients who were not operated upon. I have two patients

in mind, and one happens to be my wife, who have passed pus at intervals from the kidney for several years. We have demonstrated the source from whence the pus comes, by catheterizing the ureters. Eminent surgeons in Detroit and other cities whom I called in consultation advised the removal of the kidney or operation for drainage. My wife, who is a very nervous and delicate woman, was so frightened and depressed when informed that the surgeons deemed an operation necessary, that we feared a fatal result, if we attempted it at that time. She was then 60 years old. She has passed pus at intervals since first attack, four years ago, often in such large quantities that fully one-fourth to one-third of the volume of urine voided at times would be pus. I wish to say to you that medical treatment has kept her alive, and most of the time in tolerably good health. Several remedies that are reputed to be helpful in such cases we tried, without apparent benefit, such, for instance, as utropin and carbonate of guaiacol. The remedies from which we imagined we derived the greatest good were the peptonoids with creosote, pepto-mang, iron, quinine, salol. One thing in the treatment of which I have been careful has been to choose those remedies that did not disagree with the stomach and destroy the appetite. Have persisted in this course of treatment, omitting at intervals of weeks and sometimes months, all medication, and then again returning to them when symptoms warned us of a recurrence of the disease. At these intervals the urine would show no pus. We think possibly the irritating cause is the presence of stone in pelvis of kidney. Whatever it may be, slight indispositions of health, such as "taking cold," brings on an attack. Case No. 2 is almost identical in history, progress and treatment in a woman over 50 years old. It is five years since first attack. She enjoys fairly good health; attends to her household and social duties, and suffers little or no inconvenience or pain from the disease. The foregoing experiences, which I might enlarge upon, with others, convince me that many cases operated upon by the surgeon and pronounced incurable, except through agency of the knife, would recover with less danger to life, by proper medication and nursing.

A word as to difficulty in diagnosing stone in the bladder in some exceptional cases. I have in mind one such illustration that occurred in the early years of my practice, over a third of a century ago, that baffled some of the brightest experts in lithotomy in this country at that time. The patient was governor of Michigan, whose home was at Flint. When he came under my care he was unable to void his urine without the aid of a catheter. In those days we used silver catheters al-

together, and in the use of one of these, three or four times per day, I occasionally struck what I pronounced a stone. To verify my diagnosis I had my patient visit Detroit, and called on Dr. Moses Gunn, who had been my preceptor in college as professor of surgery in University of Michigan, who, after thorough examination and sounding of bladder, to my great surprise and mortification, decided against me, and said, "Doctor, there is no stone there." Not being satisfied, I afterwards, in the course of three or four months, called Drs. Zina Pitcher, Henry Lyster and Prof. A. B. Palmer at different times, all of whom examined the patient, got history of the case, sounded the bladder with steel sound, and gave as their opinion "there is no stone there." Still clinging to my own opinion that there was a stone there, I persuaded my patient to call Dr. Charles A. Pope, of St. Louis, Mo., who at that time had more lithotomy operations to his credit than any surgeon in America. One hundred and ten cases, if I remember correctly. He came to Flint; arrived in the evening, and sounded the bladder, but lo and behold! he said, "*There is no stone there.*" He remained over night and made a second examination the following morning, with same result, "*no stone.*"

Imagine my predicament. I had said there was a stone, but at the times they made their examinations, I had no more success in reaching or striking it than they. But still I adhered to the belief that it was present, but sacculated in such way that it could not always be found.

Soon after Dr. Pope's visit, in emptying the bladder by catheter, I obtained a few scales of phos. of lime. These I at once forwarded to Dr. Willard Parker, of New York City (Prof. of Surgery in College of Physicians and Surgeons), accompanied by a letter giving history of case. He replied: "I feel a delicacy in expressing an opinion in a case I have not seen and examined, especially since such eminent men as Drs. Chas. A. Pope, Moses Gunn, Zina Pitcher and others have given an opinion against you, but, judging from your letter and the specimen sent me, I must say I think there *is a stone there.*"

We arranged to have him come to Flint and see the patient. He did so, and operated and removed a stone that weighed over two ounces, besides scooping and washing out a large quantity of scales that had been pocketed in the cul de sac, that concealed and held the stone. I relate this experience to illustrate the point, that it is not always wise, for experts in any department of medicine or surgery, to be too positive in their own opinion as to diagnosis and prognosis.

T. A. MCGRAW, DETROIT.

I have already had one say upon this subject. I am very much interested in the question of the pathology of tumors, which has been so ably presented; it is I think one of the things which has to be studied by careful examination in order for us to get at the real causal relations which produce tumor.

As regards tuberculosis of the kidney, which I was especially put down to discuss, the great point in all these cases of tuberculosis of the kidney is to diagnosticate them early, for this reason, that when a tuberculosis of the kidney occurs, it affects usually at first only one kidney, but afterwards involves the other kidney. That is a very peculiar thing when we come to think of it. Take, for instance, a general tuberculosis of the body, in tuberculosis of the lung we comparatively rarely find tuberculosis of the kidney as a secondary disease; I think that our experience will show that tuberculosis of the lungs is comparatively rarely associated with secondary tuberculosis of the kidneys, but a tuberculosis of one kidney sooner or later causes tuberculosis of the other kidney, and there comes in the question of how and why. If we say that in the tuberculosis of one kidney the bacilli is taken up into the blood and carried into the other, we have the problem before us, why in the other forms of tuberculosis it is not so carried?

So that in tuberculosis of the kidney we must assume one of two things—either that, as the disease goes on, the tuberculosis of the one kidney by nervous irritation causes a great tendency to tuberculosis of the other, or that both kidneys have some congenital malformation or weakness which predisposes them to the disease.

I believe the practical point is that we must learn to distinguish these cases early.

I have a young married lady under my charge who is suffering from a suppurating trouble of the kidneys, of both kidneys, I think—I examined the bladder carefully with a cystoscope and found around both ureters a field irritation. The rest of the bladder seemed to be sound. We have not been able to find any tubercular bacilli or calculi in the urine; the symptoms point to tuberculosis, but the microscope has not as yet confirmed it.

In those cases where both kidneys are affected Israel strongly advises not to operate. In some cases of operation it is not necessary to take out the whole kidney; Israel gives a striking example of that. The blood vessels of the kidney are so arranged that the upper and lower folds are absolutely separated one from the other; that is, they each have blood vessels running one to

the lower pole and one to the upper, and each with their own little series of capillaries and almost entirely distinct. Israel had a case where he found a shadowy mass in the upper pole of the kidney; he cut that pole out, and sewed some gauze with catgut on to the cut kidney, and left it, and the patient recovered and lived for some years. There is a case where you can resect one kidney and where you have positive reason for believing that the disease is limited to one pole or the other. Where one kidney is diseased and the tuberculosis has advanced there is only one thing to do; that is, take out the kidney; in the majority of cases, take out the whole kidney. I do not mean to say that the best thing in these cases is to limit our operation to one pole of the kidney, but I mean to say it can be done and done successfully if you are positive that the disease is limited to one pole, but in the majority of cases we have to take out, of course, the whole kidney.

W. H. HAUGHEY, BATTLE CREEK.

I feel thankful for the amount of discussion that has been aimed at my paper; I felt particularly gratified in hearing Dr. McGraw handle it as ably as he did in bringing out the point that I hinted at of a single infection, at least at first.

I wish to call attention to the fact that in my two cases the operation was done soon enough, at least so that the patients have recovered, and before the other kidney was involved.

It is unfortunate, but none the less true, that we are very seldom, or not always at least, favored with an opportunity of getting at these patients soon enough to make out the diagnosis early enough to operate. A person cannot get along without both kidneys very well, and an operation to remove both would be out of the question.

The catheterization of the ureters I have found somewhat difficult; by persistence, however, we can accomplish it in the female, nearly always, and it is a valuable measure in the diagnosis. In elderly patients, such as these reported by the last speaker, I hardly think I would recommend a very severe operation, or the removal of a kidney if the disease had gone on quite awhile, as it usually does, in these elderly people. They are timid about an operation, or they hold off until the thing has gone too far for operation. And where the trouble only torments, but is not dangerous to life, it would be manifestly wrong to operate.

The last case reported was one where the diagnosis of the doctor was right, and I congrat-

ulate him upon his diagnosis of stone and proving later on that he was correct.

The point I was in hopes would be discussed more in my paper was one that has received no attention whatever, and that is whether there is much liability of this infection spreading out and becoming general systemic tuberculosis through the ureter, if a portion of it is left. I myself think that the danger is absolutely nil, and from the fact that I cannot find that Dr. Kelly advocates the removal of a section of the bladder for that particular trouble any more, I believe that he must have abandoned it himself, and I hope he has.

The Clinton County Medical Society, recently organized, held a meeting on October 2nd at St. Johns, at which Dr. Angus McLean, Detroit, read a paper on "Surgical Treatment of the Biliary Passages."

THE JOURNAL records the program of the first meeting, since organization, of the Mecosta County Medical Society:

PROGRAM.

Demonstration of the methods of using the X-Ray for Diagnostic and Therapeutic purposes; discussion of its effect in Carcinoma, and exhibition of patients.

W. T. DODGE, M. D., Big Rapids.

Discussion of the effects of the X-Ray in Tuberculosis and presentation of case.

L. S. GRISWOLD, M. D., Big Rapids.

Treatment of compound fractures of the leg with report of cases.

G. VAN AMBER BROWN, M. D.,
McBain, Mich.

Secretary of Missaukee County Medical Society.

Pelvic Abscess.

F. W. NOBLE, M. D., Remus.

The Microscopical Diagnosis of Tuberculosis with exhibition of slides under the microscope.

A. A. SPOOR, M. D., Big Rapids.

BOOKS RECEIVED.

General Paresis—Chase.

Transactions of the Missouri State Medical Society.

Medical communications of the Massachusetts State Medical Society.

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DETROIT, OCTOBER, 1902

THE PRESENT STATUS OF MEDICAL REGISTRATION IN MICHIGAN.

Some three years have passed since the present medical act has become law, and the Medical Registration Board was appointed to administer it. To some few, no doubt, the act itself and its administration have been more or less of a disappointment, but to the greater number of those interested the medical act and its administration have been at least a qualified success. There is no question but that among the latter class is included those who comprehend and appreciate the difficulties and conditions the medical board has had to meet and to contend with, and these latter are,

therefore, better qualified to give an intelligent and conservative estimate of the benefits accomplished by a medical act in which provision is made for its administration by a mixed board, whose membership is composed of adherents of the various schools of medicine recognized in this state.

To judge intelligently and fairly of the medical act and its administration, we must not lose sight of the conditions present in Michigan three years ago, about the date when the act came into operation.

For a period of sixteen years immediately prior to this date, Michigan had been legally infected with an act entitled, "An Act to Promote Public Health," passed by the Legislature of 1883, under

which holders of fraudulent diplomas, and unqualified and disreputable practitioners generally, were not only able to flourish, but under which they were able also to assume the qualifications of legal medical registration, and as a natural sequence were credited by a credulous public with a degree of reputability to which they were not entitled. In one county alone in this state over three hundred of these fraudulent registrations were made. So extremely farcical was the medical act of 1883, and the provision for its administration, that even the buying of a fraudulent diploma was an unnecessary expense, for scores of registrations, so-called, were made upon false affidavits, the affiants choosing the college most suited to their various tastes or environment as a basis for their illegal registration. As a natural outcome of this semi-legalized condition, diploma mills started up in neighboring states, and not only prospered, but also assumed the offensive in medical legislation.

Under the circumstances as noted above the framers of the present medical act had no easy problem to solve in attempting medical legislation, and it was necessary for them to take into consideration existing conditions, public policy and popular prejudice. Various interests as well as various schools of practice had to be harmonized. Opposition from within as well as from without the medical profession had to be met and pacified. The proposed act had to remedy the evil of former discredited medical legislation. The profession had for some thirty years been endeavoring to obtain fair and reasonable medical legislation from the state and had failed to obtain anything further than the discredited '83 act. On account

of the conflicting interests involved and organized opposition, it was not possible to obtain at that time a perfect medical act, and the authors of the Chandler Medical Bill did not attempt the impossible, otherwise the '83 act would still have been in existence, and the notorious Armstrong schools would still be flourishing.

The medical act of 1899 has fulfilled exactly the expectations of its authors. It has rid the state and society of hundreds of fraudulent and incompetent practitioners, and has made the practice of the unqualified extremely precarious and unprofitable, at the best, wherever attempted. It has raised the standard of qualification for graduation at colleges not only in Michigan, but in other states its influence in this direction has been felt and favorably commented upon. In the matter of organization and records it has rendered order out of chaos. The inquiries and absolute exactness of records to meet possible legal suits in hundreds of rejections is a labor that can hardly be appreciated. In dozens of cases it was necessary to give weeks of labor to single cases. It has administered the act equitably in those cases of worthy and reputable practitioners who had bona-fide moral claims to consideration, and has knowingly done injustice to no one. In place of hundreds of unqualified, and in many instances fraudulent practitioners, coming into Michigan yearly and registering, no one at the present date receives a certificate entitling him to registration unless possessed of qualifications of unquestionable standard. The present medical act has fulfilled the conditions for which it was created, and has demonstrated to the legislature and the people its usefulness as a

legitimate and useful measure for the protection of the public; and finally it has withstood all attacks made against its constitutionality in the Supreme and other courts of this state.

The Chandler Medical Act covers about the same ground that the first medical acts did, among others, in the states of Illinois, Ohio, Wisconsin and Indiana. These states quoted have recently advanced to more perfect medical legislation, and the time has now come when Michigan should also advance. The history of medical legislation shows the utility of advancing slowly but surely, of establishing a moderate medical act and amending it from time to time until model legislation has been attained. In the meantime the people have not only been educated to the advantages of state regulation of the practice of medicine, but the profession has also been benefited by this policy of moderation and experience.

There is undoubtedly a strong and ever-growing opinion among the intelligent public and the profession at this time for a higher standard of medical qualification for license in this state, and recognizing this opinion it is the intention of the State Board of Registration in Medicine to ask for amendments to the present medical act at the coming meeting of the Legislature, having in view not only the elevation of the standard, but also the uniformity of the act in connection with the medical acts of some of the better states. The State Medical Society passed upon these proposed amendments (see report of Committee on Legislation, page 84) at its Port Huron meeting in June last. If each county medical society throughout the state would also endorse and recommend these

proposed amendments, the task of passing them through the Legislature would be comparatively easy.

THE REORGANIZATION OF THE AMERICAN MEDICAL ASSO- CIATION AND RECIPROC- ITY FOR THE LICENSE TO PRACTICE MED- ICINE.

After Dr. Wyeth, President of the American Medical Association for the year 1901-02, declared at Saratoga that inter-state comity for the license to practice medicine was second in importance only to the reorganization of the American Medical Association, we may well point out in what way inter-state reciprocity for the license to practice medicine may be helped along by the reorganization of the American Medical Association. The vital connection between the two movements and its mutual helpfulness can be understood with little difficulty. In order to attain anything of importance for the welfare of the public and the profession, it must be reached by organized efforts. The reorganization of the American Medical Association means in reality an organization of the medical profession of the country. It is only natural that an organization of physicians will first of all consider the condition on which the very existence of a medical profession is based. The physician's life-purpose is to practice medicine. In order to practice medicine he must have patients. The American physician should have the possibility to respond to his duty in any part of his country. That this should be the case is a trite remark. Unfortunately, however, it is not the case. One

state excludes practitioners of other states sometimes without any reason whatever. The organized profession of the country can easily exert its combined influence with a decidedly certain outlook of success towards the establishment of sound conditions. These will exist:

First: When unjustified discrimination against well-qualified practitioners is done away with.

Second. When conditions, which justify discrimination against a state, are changed in this state.

That county, state and national organizations must work together for this purpose is apparent; that they will work together should not be doubted.

EMIL AMBERG.

RECIPROCITY AMONG THE SEVERAL STATE MEDICAL SOCIETIES.

When a Presbyterian moves from Pennsylvania to Michigan he does not lose his membership in the Presbyterian Church. A certificate of good standing by his old is presented to the new church, and special membership is uninterrupted. The same method prevails in many fraternal orders and in all churches. Removal from one state to another calls for no resignation from the one state and election by the other. Why should a different custom prevail among the several State Medical Societies?

From 1819 to 1851 Michigan dismissed its members to other State Medical Societies by a certificate of good standing, and accepted those bringing similar certificates from other State Societies. On entering upon the second stage of its evolution this custom was

discontinued and has not been resumed. On entering upon the fourth stage of evolution it has placed in its organic law a provision by which it offers to establish such reciprocity with any State Medical Society having equivalent standards of membership. Its officers are directed to communicate this offer to such societies, and we may confidently hope the custom may finally include the entire United States.

It should be the custom that once a member of a State Medical Society always a member, no matter how many changes in state residence are made—so long as the individual meets his obligations.

The value of such reciprocity to professional organization is self-evident. A bank note passing current in Michigan is good, but one current in each of the other states is better. So membership in the Michigan State Medical Society is good, but if this carried a practical membership in every other State Society it would have its value enhanced.

At this time when states are seeking to render membership more attractive this element is worthy of serious consideration. Which states will be the first to grasp this hand of broader fellowship extended by the Michigan State Medical Society?

ON THE ETIOLOGY OF TUBERCULOSIS.

That the etiology of tuberculosis is to be sought for elsewhere than in the biology of the tubercle bacillus alone is becoming more and more a scientific conviction.

For nearly twenty years the best efforts of many of the best minds of the

laboratory world have been directed toward the isolation of a "specific" from culture products; and the result, while of infinite value in one way and another to our knowledge of the subject, has been, we must admit, a failure.

Consumption means more than the development and growth of a micro-organism in the body. Apparently there is a "pretuberculous" and fundamental error in metabolism, which, so far at least, has eluded search, and still remains the terra incognita of the scientific "path finder."

It is hard to abandon idols, and at the end of such a long and diligent, though fruitless, search after anti-toxins and immunizing sera, it is not a little humiliating to be forced to acknowledge defeat and to confess that in the care of phthisis we are scarcely advanced beyond where Hippocrates left us.

To be sure, we still believe, and with good reason, that the tubercle bacillus is *one* of the essential factors without which the clinical picture of phthisis is impossible. What we have learned is that it is not the *only* essential, and that the most difficult problem in the etiology of consumption is yet to be solved. There is no doubt that this problem will be manfully grappled, and in the end successfully solved, perhaps suddenly, like the tremendous discovery which Koch made; more likely, however, by the slow, laborious process of piecing together the fragmentary observations of studious minds in all parts of the world. There is, after all, something of keen enjoyment in the thought that the privilege of this and numerous other great discoveries, vital to the welfare of the race, is shared by even the most humble and obscure, as well as the great and renowned,

in the medical profession. The thought should be a stimulus to careful, honest and intelligent observation. In the routine clinical practice no less than in the completely equipped laboratory, men should "read, mark, learn and inwardly digest" what is before them, each gathering data of information from the resourceful school of experience, and each should be not only willing but zealous to add his knowledge thus gained, however insignificant he may deem it, to the general fund, for to this general fund in all human probability we must look for the means of solving the still obscure problem of the etiology of tuberculosis, than which no more important subject is before the world.

HERBERT M. KING.

THERAPEUTICS OF THE X-RAYS.

At this time so much is being said and written regarding the application of the Roentgen rays in the treatment of disease, such as the various forms of malignant tumors and a great variety of the chronic and intractable cutaneous lesions, it might be of advantage to review the work that has been done and to see if the facts bear out the optimistic opinions we have heard on all sides. That it is of great value we think no one will deny, but that it is a universal cure for all forms of malignant disease is a mistake that should be corrected. That it will relieve the pain in almost all cases is a great boon to the sufferer, and, if it did nothing more, it would still be a source of great satisfaction to the patient, as well as to the physician. In many cases it seems to hold the disease in check, while in many others a permanent cure seems to be effected. Of course it is ridiculous to expect a cure of an advanced case of osteo-

sarcoma, and in fact in all of the sarcomas it is likely to prove satisfactory only so far as to give temporary relief. On the other hand, with the carcinoma and epithelioma, when taken before the case has advanced too far and given careful treatment, there will result a fair percentage of cures.

Better results will be attained in the treatment of the chronic diseases of the skin. In lupus, psoriasis, acne, and many of the chronic eczemas the result is satisfactory, a large percentage of the cases making an apparently complete recovery.

Of course it will be some time before we shall be able to state with a definite certainty that cures are permanent. The whole treatment is as yet in the experimental stage, and time alone will prove their permanency. We believe that careful work along these lines will result in a larger percentage of cures than have been attained by other therapeutic means, and will prove an inestimable boon to many sufferers.

In order to give satisfactory treatment a physician should make a study of electro-therapeutics. Simply because he has an apparatus and can light a Crook's tube is no indication that he can treat the cases satisfactorily. Everything else being equal, the physician best equipped in the knowledge of electro-therapeutics will undoubtedly attain the best results.

P. M. CAMPBELL, Detroit.

The first meeting of the Wayne County Branch of the Michigan State Medical Society, viz., of the Wayne County Medical Society, took place at the Hotel Normandie on September 4, 1902, and was well attended. The paper of the evening was read by Dr. Emil Amberg, of Detroit. Subject, "The Surgical Anatomy of the Middle Ear a Factor in Favor of Early Interference in Suppurative Affections of the Same," with demonstrations. The essayist presented a number of specimens, etc., illustrating the topic under discussion."

Reports of Committees

REPORT OF COMMITTEE ON LEGISLATION, MICHIGAN STATE MEDICAL SOCIETY, AT THE ANNUAL MEETING, PORT HURON, JUNE 27, 1902.

Since the report which was tabled at last year's meeting was brought before the Society some changes have been thought necessary. Therefore the committee submits the following suggestions in the matter of amendments to the present medical act, which covers and adds to the report of 1901.

(1) That section 1 be amended by substituting for the physio-medical member on the board an additional homœopathic member, making the school composition of the board as follows: Regulars, 5; Homœopaths, 3; Eclectics, 2; total, 10. As the physio-medical school is represented in Michigan by less than twenty registered practitioners, the necessity for representation on the board of this school does not exist. The homœopaths have not asked for additional representation on the board, and have lived up to the letter and spirit of the agreement made with the committee in 1899, but as they number in registered physicians three times the combined strength of the eclectics and physio-medics in this state, it is only fair that they should have an additional board member.

(2) That section 3, subdivision 3, be amended by requiring all candidates for examination before the board to be graduates in good standing of legally authorized and reputable medical colleges, approved and listed by the medical board, having a course of not less than four years of six months each, no two courses to be taken in the same year. And also that the candidate, in addition to the above medical qualifications, present evidence to the board of graduation from an approved high school, academy, college or university, previous to the attendance in such listed and approved medical colleges. Graduates in Arts, Science, Philosophy, Dentistry and Pharmacy of approved colleges may, however, be credited with one full course of study by approved colleges provided they show attendance in their combined courses in accordance with the schedule of Minimum Requirements of Medical Education hereafter quoted.

MINIMUM STANDARD OF EDUCATION

Required under Reciprocity Qualification No. 1.

LECTURES AND TEACHING.

30 hours in Electro-Therapeutics.

160 hours in Physiology.

- 100 hours in Pathology.
- 80 hours in Histology.
- 200 hours in Practice of Medicine.
- 100 hours in Obstetrics.
- 60 hours in Bacteriology.
- 15 hours in Medical Jurisprudence.
- 160 hours in Anatomy.
- 160 hours in Chemistry and Toxicology.
- 130 hours in Therapeutics.
- 30 hours in Hygiene.
- 200 hours in Surgery.
- 30 hours of Gynecology.
- 48 hours in Diseases of the Eye and Ear.
- 100 hours in Pharmacology.

LABORATORY WORK AND DEMONSTRATIONS.

- 240 hours in Anatomy.
- 120 hours in Pathology.
- 100 hours in Histology.
- 120 hours in Bacteriology.
- 36 hours in Obstetrics.
- 60 hours in Eye and Ear.
- 180 hours in Physiology.
- 180 hours in Chemistry and Toxicology.
- 200 hours in Surgery.
- 120 hours in Practice.
- 32 hours in Dermatology.
- 120 hours in Gynecology.

MINIMUM STANDARD OF PRELIMINARY EDUCATION

Required under Reciprocity Qualification No. 1.

A certificate of graduation from an approved and reputable high school, academy, college, or university with the following minimum requirements:

GROUP I.—ENGLISH LANGUAGE.

- (a) English Grammar.
- (b) Rhetoric and Composition.

GROUP II.—HISTORY.

(a) History of the United States, as presented in McLaughlin's History of the American Nation, Johnston's History of the United States, or equivalent text.

(b) General History, as presented in Myer's General History, or equivalent text. Greek and Roman History or English History will be accepted as a substitute for General History.

GROUP III.—MATHEMATICS.

(a) Algebra—Fundamental rules, Fractions, Simple Equations, Involution and Evolution, the Calculus of Radicals and Quadratic Equations, as given in Onley's Complete School Algebra, or Beman and Smith's Elements of Algebra, or some equivalent text.

(b) Geometry—Plane Geometry as given in Beman and Smith's Plane and Solid Geometry, or equivalent text.

(c) Plane Trigonometry, as given in Wentworth's Trigonometry, or equivalent text.

GROUP IV.—NATURAL SCIENCES.

(a) Physics, as presented in Carhart and Chute's Elements of Physics, or an equivalent text.

(b) General Biology, or Botany and Zoology, as presented in Sedwick and Wilson's General Biology, or Spaulding's Introduction to Botany and Kingsley's Comparative Zoology. These courses will be accepted only when accompanied by laboratory work.

(c) Chemistry, as presented in Freer's Elementary Chemistry, or an equivalent amount of work in Remsen's Introduction to the Study of Chemistry.

That a committee be appointed by the president to review the above suggested standard of medical and preliminary education who shall report at this meeting, and the committee would suggest the following as members of such committee: A. W. Alvord, Battle Creek; H. B. Landon, Bay City; V. C. Vaughan, Ann Arbor; H. O. Walker, Detroit; Wm. Fuller, Grand Rapids; Hal C. Wyman, Detroit; D. B. Cornell, Saginaw.

(3) That, under section 3, subdivision 4 of the reciprocity clause of the medical act, Qualifications No. 1 and No. 2, adopted by the American Confederation of Reciprocating Examining and Licensing Medical Boards, be adopted. *Provided*, That the regulations governing the exchange of certificates under Qualification No. 1 shall be in harmony with the minimum requirements for preliminary and medical education itemized above.

QUALIFICATION NO. 1.

That a license or certificate of qualification of at least one year's date, based upon presentation of a satisfactory diploma, and an examination before a state board in specified branches of medicine and surgery, may be accepted at the discretion of a board in lieu of an examination, and as a basis upon which the license of a state may be issued.

QUALIFICATION NO. 2.

That a license or certificate of qualification issued by a State Board of Registration or Medical Examiners of at least one year's date, based upon presentation of a satisfactory diploma, and the recommendation of a State Board of Registration or Medical Examiners as to the reputability of the applicant, may be accepted at the discretion of a board in lieu of an examination and as a basis upon which the license of a state may be issued.

(4) That section 3, subdivision 5, or registration by "approved college" be struck out.

(5) That a section shall be added giving the board authority to cancel certificates obtained through fraud, and also the cancellation of certificates, in consequence of dishonest, immoral or unethical conduct.

B. D. HARISON,
Chairman.

(NOTE.—The committee, consisting of Drs. Alvord, Landon, Vaughan, H. O. Walker, Fuller, Wyman and Cornell, reviewed and approved the above quoted minimum standard of medical and preliminary education.—EDITOR.)

MICHIGAN STATE BOARD OF REGISTRATION IN MEDICINE.

Report of Secretary, for eight months, from October 1, 1901, to June 1, 1902.

STATEMENT OF RECEIPTS.

October 1, 1901, to May 31, 1902, inclusive.

To balance Oct. 1, 1901.....	\$2,256 59
To fees received Approved College, Sec. 3, Sub. 5, 254....	\$2,538 00
To fees received Examination, Sec. 3, Sub. 3, 23.....	230 00
To fees received Re-registration, Sec. 3, Sub. 1, 9.....	9 00
To fees received Lithographed Certificates, 223	223 00
To fees received Duplicate Certificates, 3.....	3 00
	<u>3,003 00</u>
	\$5,259 59

STATEMENT OF DISBURSEMENTS.

October 1, 1901, to May 31, 1902, inclusive.

By printing and stationery	\$611 78
By postage.....	100 00
By rent.....	93 75
By light.....	12 75
By porter.....	7 50
By charwoman	15 00
By clerk hire, committee. 9 10	
By attendant at examination	4 00
By express.....	15 96
By P. O. box.....	2 00
By office supplies and fixtures	11 62
By salary of secretary... 800 00	

By clerk hire, office.....	422 39
By incidentals.....	2 00
	<u>\$2,107 85</u>
By Expenses of members	308 45
	<u>\$2,416 30</u>
	\$2,843 29
By returned fees.....	63 00
	<u>\$2,780 29</u>
Balance	\$2,780 29

RECAPITULATION.

To receipts Oct. 1, 1901, to June 1, 1902	\$3,003 00
To disbursements, Oct. 1, 1901, to June 1, 1902.....	\$2,416 30
To returned fees, Oct. 1, 1901, to June 1, 1902.....	63 00
	<u>2,479 30</u>
June 1, 1902, balance.....	\$ 523 79
Oct. 1, 1901, balance.....	<u>2,256 59</u>
	\$2,780 29
Total balance June 1, 1902..	\$2,780 29

I would refer you to page 14 of the Official List, under the heading Estimated Expenses 1901-1902, and would call your attention to the fact that the disbursements during the past eight months are well within the estimated expenses, and that the receipts are also up to the anticipated income of the board. Owing to the changes of membership on the board, and also the necessity of publishing an official list of certificate holders, the item of printing and stationery amounts to nearly four hundred dollars more than it ordinarily would have done provided these extra items had not been necessary.

REGISTRATIONS FROM APPROVED COLLEGES.

	No.
University of Michigan, Ann Arbor, Mich....	37
University of Michigan (Homœo.), Ann Arbor Mich.	2
Detroit College of Medicine, Detroit, Mich...	54
Rush Medical College, Chicago, Ill.....	11
Michigan College of Medicine and Surgery, Detroit, Mich.....	14
University of New York and Bellevue Hospital, New York, N. Y.....	5
Cleveland Homœopathic Medical College, Cleveland, O.....	2
Jefferson Medical College, Philadelphia, Pa...	4
University of Pennsylvania, Philadelphia, Pa...	3
The Bennett College of Eclectic Medicine and Surgery, Chicago, Ill.....	6
Hahneman Medical College and Hospital, Chicago, Ill.....	16
Medical Dept. Buffalo University, Buffalo, N. Y.....	4
Vanderbilt University, Nashville, Tenn.....	1
The Eclectic Medical College of the City of New York, New York, N. Y.....	1
College of Physicians and Surgeons, Chicago, Ill.	11

Eclectic Medical Institute, Cincinnati, O.....	4
New York Homœopathic Medical College and Hospital, New York, N. Y.....	1
Detroit Homœopathic Medical College, Detroit, Mich.	5
Cleveland Homœopathic Medical College, Cleveland, O.....	1
Harvard University, Medical School, Boston, Mass.	2
Cornell University, Medical Dept., New York, N. Y.....	1
Northwestern University Medical School, Chi- cago, Ill.....	1
Chicago Homœopathic Medical College, Chi- cago, Ill.....	3
American Missionary College, Battle Creek, Mich.	3
Grand Rapids Medical College, Grand Rapids, Mich.	15
Saginaw Valley Medical College, Saginaw, Mich.	40
Illinois Medical College, Chicago, Ill.....	1
	248
Fees returned to.....	5
Incomplete	1
Total	254

B. D. HARISON,
Secretary.

A meeting of the representatives of the Illinois, Wisconsin, Indiana and Michigan State Boards was held in Chicago, January 19th last, and the Confederation of Members of Reciprocating State Medical Examining and Licensing Boards was founded. At an adjourned meeting of the Confederation held in Chicago, May 20th last, the name of the Confederation was changed to the American Confederation of Reciprocating, Examining and Licensing Medical Boards.

The Confederation adopted a Constitution, of which the object is to establish reciprocal relations between the medical examining and licensing boards of the states, territories, districts and provinces of the United States; the purpose of which being that thoroughly worthy and well qualified physicians and surgeons who have been legally authorized to practice under the laws of one of said states, territories, districts or provinces, may be given authority and admitted to practice in any state, territory, district or province represented in this Confederation without a repetition of the tests of qualification to which such practitioner has submitted.

The Confederation also adopted the two following qualifications as a basis for the exchange of state certificates by boards who hold membership in the Confederation:

1. That a license or certificate of qualification of at least one year's date and based upon presentation of a satisfactory diploma, and an examination before a board in specified branches of medicine and surgery, may be accepted at the discretion of a board in lieu of an examination, and as a basis upon which the license of a state may be issued.

2. That a license or certificate of qualification issued by a State Board of Registration or Medical Examiners of at least one year's date, based upon presentation of a satisfactory diploma, and upon the recommendation of a State Board of Registration or Medical Examiners as to reputation of the applicant, may be accepted at the discretion of a board in lieu of an examination, and as a basis upon which the license of a state may be issued.

The Wisconsin and Indiana Boards expressed their desire to reciprocate fully with the Michigan Board, and with each other, under the terms of the above qualifications, and in order to make such reciprocity effective it will be necessary for the board to pass a resolution instructing its executive officers in the matter, and also to adopt forms in connection with such exchange of state certificates under both of the above quoted qualifications.

Owing to the fact that Illinois, Ohio, and several other states reciprocity laws provide for the recognition of certificates obtained only through examination before a state board, it is only possible for Michigan to exchange certificates under qualification No. 1 of the Confederation with such states. Resolutions covering such form of exchange of certificates should be adopted by this board, and forms in connection therewith.

Dr. Harison then calls attention to the almost unanimous opinion among those interested in the subject to the necessity and advisability of amending the present medical act at the next session of the legislature. The amendments contemplated and suggested would bring the act up to the standard adopted by some of the best states, such as New York and Ohio. Section 3, Subdivision 5, or the 'approved college' section would be eliminated, and Section 3, Subdivision 3 would be amended by requiring all applicants for examination to be graduates of approved colleges, and a standard of preliminary education equal to that demanded by Ohio would be required.

Also a section should be added giving the board authority to cancel certificates obtained through fraud, and in consequence of immoral, dishonest, or unethical conduct.

REPORT OF THE COMMITTEE ON NATIONAL LEGISLATION, MICHIGAN STATE MEDICAL SOCIETY, AT ANNUAL MEETING, PORT HURON, JUNE 27, 1902.

For the second time the Michigan State Medical Society was represented at the conference of the Committee on National Legislation of the American Medical Association and Affiliated Societies, which took place in April, at Washington, D. C.

Many measures pending received the attention of the conference. I may be permitted to make special reference to a subject which was brought up by your delegate at the second meeting of the conference, in 1901, and which received thorough consideration at the third annual conference this year, viz.: the subject of interstate reciprocity for the license to practice medicine. As you know, considerable attention was paid to the subject at the meeting of the American Medical Association at Saratoga a few weeks ago. Dr. John Allan Wyeth said, in his presidential address: "Scarcely second in importance to a uniform scheme of reorganization is that of a uniform standard of requirements for the practice of medicine in the various states. It is of vital interest to the welfare of the profession that the question of reciprocity or interstate comity should be settled, so that without any sacrifice of the very highest requirements, a physician in practice in one state, having gone before a competent board, upon change of residence might be permitted to practice without being subjected to a second state examination, in the place of his adoption. The House of Delegates will, without doubt, act upon this matter in this session."

I may say that the House of Delegates appointed a Committee on Reciprocity consisting of five members. The renewed interest in the question of reciprocity is directly traceable to the efforts of your delegate before and after he was appointed. This interest has manifested itself not only in the American Medical Association, but also in other National, State and local societies. The medical literature of recent years, and especially of recent months, shows that the movement toward Interstate Reciprocity is growing and it has already borne good fruits.

The work of the Conference is in the interest of professional and public welfare, and it would be entirely in order for the Michigan State Medical Society, in my opinion, to pay the expenses of the delegate to Washington.

If I understand the proceedings of the House of Delegates at Saratoga correctly (see Journal of the American Medical Association, June 21st,

page 165), the following was adopted, * * * and an auxiliary committee to be composed of one member from each state and territorial society represented in this Association, to be appointed annually by the President of this Association upon the nomination of such state or territorial society, etc."

In conclusion, your committee recommends (1) that the Committee be continued and that the Michigan State Medical Society nominate such a committee of one and an alternate. (2) That the actual expenses of the delegate for the next meeting be borne by the society, the appropriated sum not to exceed \$60.

EMIL AMBERG,
Committee.

Obituary

It is with sorrow and with appreciation of the great loss to the medical profession of the state, that The Journal announces the death of Dr. Jerome M. Snook, of Kalamazoo, on July 8th, 1902. He was respected and honored by his fellow-men and esteemed by his professional brethren; his death will be keenly felt.

Dr. Snook's early life was passed in the east. In 1865 he came to Michigan and became a student at Kalamazoo College, where he was enrolled for three years, after which, for several years, he engaged in business life. During this time his medical studies began and in 1870 he became a pupil of Dr. H. O. Hitchcock; he later entered the medical department of the University of Michigan. After completing his work there he came back to Kalamazoo and almost continuously until the day of his death, practiced his profession in that city. His unceasing labors brought him into prominence both locally and throughout the state. In 1877 he was health officer of Kalamazoo; in 1889 was president of the Kalamazoo Academy of Medicine. During the past few years, Dr. Snook, realizing that his strenuous life was making inroads upon his health and vigor, retreated somewhat from his active duties, though almost until the day of his death his professional work occupied his time and attention.

Dr. Snook was a conspicuous example of the professional and financial success which comes to a life devoted strictly to its own duties. He was faithful and industrious to the end and with him it had been quietly and unostentatiously a governing rule to attend strictly and faithfully to his own business.

He was a good citizen and will be much missed, especially by his patients, to whom he greatly endeared himself.

CONSTITUTION AND BY-LAWS
OF THE
MICHIGAN STATE MEDICAL SOCIETY

ADOPTED AT PORT HURON, JUNE 26, 1902.

CONSTITUTION.

ARTICLE I.—NAME OF THE SOCIETY.

The name and title of this organization shall be the Michigan State Medical Society.

ARTICLE II.—PURPOSES OF THE SOCIETY.

The purpose of this Society shall be to federate and to bring into one compact organization the entire medical profession of the State of Michigan and to unite with similar Societies in other States to form the American Medical Association; with a view to the extension of medical knowledge, and to the advancement of medical science; to the elevation of the standard of medical education, and to the enactment and enforcement of just medical laws; to the promotion of friendly intercourse among physicians, and to the guarding and fostering of their material interests; and to the enlightenment and direction of public opinion in regard to the great problems of state medicine; so that the profession shall become more capable and honorable within itself, and more useful to the public in the prevention and cure of disease, and in prolonging and adding comfort to life.

ARTICLE III.—COMPONENT SOCIETIES.

Component Societies shall consist of those County Medical Societies which hold charters from this Society.

ARTICLE IV.—COMPOSITION OF THE SOCIETY.

SECTION 1. This Society shall consist of Members, Delegates and Honorary Members.

SEC. 2. *Members.* The Members of this Society shall be the members of the Component County Medical Societies.

SEC. 3. *Delegates.* The Delegates shall be those members who are elected in accordance with this Constitution and By-Laws to represent their respective Component County Societies in the House of Delegates of this Society.

SEC. 4. *Honorary Members.* Honorary members shall be of two classes, resident and non-resident.

SEC. 5. Resident Honorary Members shall be chosen from those who have practiced medicine not less than *thirty* years and have been active members in good standing of this Society for at least *ten* years. They shall be nominated by the Council at any of its meetings and may be elected by the House of Delegates at the Annual Meeting following such nomination. They shall have all the privileges of the Society and receive all publications without the payment of dues. Not more than five Resident Honorary Members shall be elected at any one meeting.

SEC. 6. Any distinguished physician, not a resident of this State, may be elected an Honorary Member, provided he has been nominated by the Council at a previous meeting. Not more than two non-resident Honorary Members shall be elected at any one meeting.

ARTICLE V.—HOUSE OF DELEGATES.

The House of Delegates shall be the legislative and business body of the Society, and shall consist of (1) delegates elected by the Component County Societies, and (2) *ex-officio*, the officers of the Society as defined in this Constitution.

ARTICLE VI.—SECTIONS AND DISTRICT SOCIETIES.

The House of Delegates may provide for a division of the scientific work of the Society into appropriate Sections, and for the organization of such Councilor District Societies as will promote the best interests of the profession, such societies to be composed exclusively of members of the Component County Societies.

ARTICLE VII.—SESSIONS AND MEETINGS.

SECTION 1. The Society shall hold an Annual Session during which there shall be held daily General Meetings, which shall be open to all registered members and delegates.

SEC. 2. The time and place for holding each Annual Session shall be fixed by the House of Delegates.

ARTICLE VIII.—OFFICERS.

SECTION 1. The officers of this Society shall be a President, four Vice-Presidents, a Secretary, a Treasurer, and twelve Councilors.

SEC. 2. The President and Vice-Presidents shall be elected for a term of one year. The Secretary and the Treasurer shall be elected by the Council at its Annual Meeting in January, and each shall hold his office for one year. The Councilors shall be elected for terms of six years each, being so divided that two shall be elected each year. All of these officers shall serve until their successors are elected and installed.

SEC. 3. The officers of this Society, not otherwise elected, shall be elected by the House of Delegates on the morning of the last day of the Annual Session; but no Delegate shall be eligible to any office named in the first section, except that of President or Councilor; and no person shall be elected to any such office who has not been a member of this Society for at least two years.

ARTICLE IX.—FUNDS AND EXPENSES.

SECTION 1. Funds for meeting the expenses of the Society shall be provided by a yearly fee of two dollars for each member, payable in advance to the Secretary of this Society by the Secretary of his Component County Society, and from the profits of its publications.

SEC. 2. Funds may be appropriated by the House of Delegates, subject to an approval by the Council, to defray the expenses of the Annual Sessions, for publication, and for such other purposes as will promote the welfare of the Society and the profession.

ARTICLE X.—RECIPROCITY OF MEMBERSHIP AMONG STATE SOCIETIES.

To broaden professional fellowship among the State Societies, the Michigan State Medical Society, by its President and Secretary, is ready to arrange with other State Medical Societies, having equal requirements, for the interchange of certificates of membership. Members removing from one of these States to another may thus avoid the formalities of re-election.

ARTICLE XI.—REFERENDUM.

The General Meeting of the Society may by a two-thirds vote order a general referendum upon any question pending before the House of Delegates, and the House of Delegates may by a similar vote of its own members, or after a like vote of the General Meeting, submit any such question to the members of the Society for a final vote; and, if the persons voting shall comprise a majority of all the members registered at the session, a majority of such vote shall determine the question, and be binding upon the House of Delegates.

ARTICLE XII.—THE SEAL.

The Society shall have a common Seal, with power to break, to change or to renew the same at pleasure.

ARTICLE XIII.—AMENDMENTS.

The House of Delegates may amend any article of this Constitution by a two-thirds vote of the delegates registered at that Annual Session, provided that such amendment shall have been presented in open meeting at the previous Annual Session, and that it shall have been sent officially to each Component County Society at least four months before the session at which final action is taken.

BY-LAWS.

CHAPTER I.—MEMBERSHIP.

SECTION 1. All members of the Component County Societies, who are not in arrears for dues, shall be privileged to attend all meetings and to take part in all of the proceedings of the Annual Sessions, and shall be eligible to any office within the gift of the Society, except as otherwise provided. See Constitution, Art. VIII., Sec. 3.

SEC. 2. The name of a physician upon the properly certified roster of members, or list of delegates, of a chartered County Society shall be prima facie evidence of his right to register at the Annual Session in the respective bodies of this Society.

SEC. 3. No person who is under sentence of suspension or expulsion from any Component Society of this Society, or whose name has been dropped from its roll of members, shall be entitled to any of the rights or benefits of this Society; nor shall he be permitted to take part in any of its proceedings until such time as he has been relieved of such disability.

SEC. 4. Each member in attendance at the Annual Session shall enter his name on the registration book, indicating the Component Society of which he is a member. When his right to membership has been verified by reference to the roster of his Society he shall receive a badge, which shall be evidence of his right to all the privileges of membership at that Session. No member nor delegate shall take part in any of the proceedings of an Annual Session until he has complied with the provisions of this section.

CHAPTER II.—ANNUAL AND SPECIAL SESSIONS OF THE SOCIETY.

SECTION 1. The Society shall hold an Annual Session at such time and place as has been fixed at the preceding Annual Session.

SEC. 2. Special sessions of either the Society or the House of Delegates may be called by the President at his discretion or upon petition of twenty delegates.

CHAPTER III.—GENERAL MEETINGS.

SECTION 1. The General Meetings shall include all registered members and delegates, who shall have equal rights to participate in the proceedings and discussions, and to vote on pending questions. Each General Meeting shall be presided over by the President, or in his absence or disability, or by his request, by one of the Vice-Presidents. Before it, at such time and place as may have been arranged, shall be delivered the annual address of the President and the annual orations, and the entire time of the Session, so far as may be, shall be devoted to papers and discussions relating to scientific medicine.

SEC. 2. The General Meeting shall have authority to create committees or commissions for scientific investigations of special interest and importance to the profession and public, and to receive and to dispose of reports of the same; but any expense in connection therewith must first be concurred in by the Council.

SEC. 3. Except by special vote the order of exercises, papers and discussions as set forth in the official program shall be followed from day to day until it has been completed.

SEC. 4. No address nor paper before the Society, except those of the President and orators, shall occupy more than fifteen minutes in its delivery; and no member shall speak longer than five minutes, or more than once on any subject.

SEC. 5. All papers read before the Society shall be its property. Each paper read shall be deposited immediately with the Secretary, but the author may also publish the same in any reputable journal not published in this State, provided the printed article bears the statement that it was "read before the Michigan State Medical Society."

CHAPTER IV.—HOUSE OF DELEGATES.

SECTION 1. Each Component County Society shall be entitled to send to the House of Delegates each year one delegate for every 50 members, and one for each major fraction thereof; but each County Society holding a charter from this Society, which has made its annual report as provided in this Constitution and By-Laws, shall be entitled to one delegate.

SEC. 2. The House of Delegates shall meet annually at the time and place of the Annual Session of the Society, and shall so fix its hours of meeting as not to conflict with the first General Meeting of the Society, or with the meeting held for the address of the President and the annual orations, and so as to give delegates an opportunity to attend the other scientific proceedings and discussions so far as is consistent with their duties. But, if the business interests of the Society and

profession require, it may meet in advance, or remain in session after the final adjournment of the General Meeting.

SEC. 3. A majority of the registered delegates shall constitute a quorum. All of the meetings of the House of Delegates shall be open to members of the Society.

SEC. 4. It shall consider and advise as to the interests of the profession, and of the public in those important matters wherein it is dependent upon the profession, and shall use its influence to secure and to enforce all proper medical and public health legislation, and to diffuse popular information in relation thereto.

SEC. 5. It shall elect representatives to the House of Delegates of the American Medical Association in accordance with the Constitution and By-Laws of that body in such a manner that at least one of the delegates shall be elected each year.

SEC. 6. It shall divide the counties of the State into twelve Councilor Districts, corresponding to the twelve congressional districts according to the present apportionment, except that no county shall be sub-divided. When the best interest of the Society and the profession will be promoted thereby, it may organize in each a District Medical Society to meet midway between the Annual Sessions of this Society. Members of the chartered County Societies, and no others, shall be members in such District Societies.

SEC. 7. It shall have authority to appoint committees for special purposes from among members of the Society who are not members of the House of Delegates, and such committees may report to the House of Delegates in person, and may participate in the debate thereon.

SEC. 8. It shall approve all memorials and resolutions issued in the name of the Society before the same shall become effective.

SEC. 9. It shall present a summary of its proceedings to the last General Meeting of each Annual Session, and shall publish the same in the Journal of the Society.

SEC. 10. The House of Delegates shall provide for the division of the scientific work of the Society into appropriate Sections:

First—A Section on General Medicine.

Second—A Section on Surgery, Ophthalmology and Otology.

Third—A Section on Obstetrics and Gynecology.

CHAPTER V.—SECTIONS

SECTION 1. Sections shall hold their meetings at such times and in such places as shall not interfere with the General Meetings.

At each Annual Meeting a Chairman shall be chosen for each Section, to serve for one year. A Secretary shall be chosen every second year to serve for two years or till his successor is elected.

All papers, communications and matters of technical or professional nature shall be referred to the Section to which they pertain.

SEC. 2. Each Section shall annually choose a person whose duty it shall be to deliver an address before the next Annual General Session upon some subject pertaining to the department from which he is chosen.

CHAPTER VI.—ELECTION OF OFFICERS.

SECTION 1. All elections shall be by secret ballot, and a majority of the votes cast shall be necessary to elect, unless otherwise provided.

SEC. 2. The President shall annually appoint a Nominating Committee of five from the House of Delegates, no two of whom shall be from the same Councilor District.

SEC. 3. The Nominating Committee shall nominate the first, second, third and fourth Vice-Presidents, the Councilors from the Districts in which there are vacancies, and the Representatives to the House of Delegates of the American Medical Association. In so far as possible, the Vice-Presidents shall be selected with especial reference to the promotion of the work of the Councilors in the three Districts nearest their respective residences.

SEC. 4. The report of the Nominating Committee and the election of the officers nominated shall be the first order of business of the House of Delegates after the reading of the minutes on the morning of the last day of the Session.

SEC. 5. Nothing in this article shall be construed to prevent additional nominations being made by members of the House of Delegates.

SEC. 6. Any member of the Society is eligible to the office of President, and nominations to this office may be made and seconded by any member of the same.

SEC. 7. The nominations for **President** shall be made the first order of miscellaneous business at the **General Meeting of the Society** on the first day of the Annual Session. Under no other circumstances shall a nomination or announcement of candidates be made in open session.

SEC. 8. A locked ballot box, for the reception of ballots, in the custody of the Committee on Nominations above mentioned, shall be placed in or about the hall where the General Meetings are held. One or more of the Committee on Nominations shall receive and deposit the ballots in the box, at the same time checking the name of the voter from the list of those entitled to vote, which

list shall include all the members of the Society registered at the meeting.

SEC. 9. The polls shall close at 12 o'clock, noon, on the last day of the Session. The result of the canvass shall be reported to the Society at the close of the General Meeting.

SEC. 10. The person receiving the largest number of votes on the presidential ticket shall be declared President.

SEC. 11. In the event of a tie vote on the presidential office the presiding officer shall submit the names of the candidates in alphabetical order to the viva voce vote of the meeting, and the one receiving the greatest number of votes shall be declared President.

SEC. 12. The Secretary and the Treasurer shall be elected by the Council at its meeting in January, as provided.

CHAPTER VII.—DUTIES OF OFFICERS.

SECTION 1. The President shall preside at all meetings of the Society and of the House of Delegates; shall appoint all committees not otherwise provided for; shall deliver an annual address at such time as may be arranged; shall give a deciding vote in case of a tie, and shall perform such other duties as custom and parliamentary usage may require. He shall, as far as practicable, visit by appointment the various sections of the State and assist the Councilors in building up the County Societies, and in making their work more practical and useful.

SEC. 2. The Vice-Presidents shall assist the President in the discharge of his duties, and the Council in the organization and nurture of County Societies.

SEC. 3. The Treasurer shall give bond for the trust reposed in him, as fixed by the Council. He shall demand and receive all funds due the Society, together with bequests and donations. He shall, under the direction of the Council, sell or lease any estate belonging to the Society, and execute the necessary papers; and shall, in general, subject to such direction, have the care and management of the fiscal affairs of the Society. He shall pay money out of the Treasury only on the written order of the Chairman of the Council, countersigned by the Secretary of the Society; he shall subject his accounts to such examination as the House of Delegates may order, and he shall annually render an account of his doings and of the state of the funds in his hands to the Council.

SEC. 4. The Secretary, acting with the Committee on Scientific Work, shall prepare and issue the programs for and attend all meetings of the Society and of the House of Delegates, keeping minutes of their respective proceedings in separate

record books. He shall be custodian of all record books and papers belonging to the Society, except such as properly belong to the Treasurer, and shall keep account of and promptly turn over to the Treasurer all funds of the Society which come into his hands. He shall provide for the registration of the members and delegates at the Annual Sessions. In so far as it is in his power he shall use the printed matter, correspondence and influence of his office to aid the Councilors in the organization and improvement of the County Societies, and in the extension of the power and usefulness of this Society. He shall conduct the official correspondence, notifying members of meetings, officers of their election, and committees of their appointment and duties. He shall be Editor of the Journal of this Society, and shall employ such assistants as may be ordered by the Council. He shall annually make a report of his doings to the House of Delegates.

In order that the Secretary may be enabled to give that amount of time to his duties which will permit of his becoming proficient, it is desirable that he should receive some compensation. The amount of his salary shall be fixed by the Council.

SEC. 5. The business of each Annual Session shall be completed by the officers who have served throughout the Session.

CHAPTER VIII.—COUNCIL.

SECTION 1. The Council shall hold daily meetings during the Annual Session of the Society and at such other times as necessity may require, subject to the call of the Chairman or on petition of three Councilors. Three Councilors shall constitute a quorum for the transaction of business. The Council shall meet on the last day of the Annual Session of the Society for reorganization and for the outlining of the work for the ensuing year. At this meeting it shall elect a Chairman and a Secretary.

It shall hold a meeting in January of each year at a date and place fixed by the Chairman. It shall keep a permanent record of its proceedings, and through its Chairman make an annual report to the House of Delegates at such time as may be provided.

SEC. 2. Collectively the Council shall be the Board of Censors of the Society. It shall consider all questions involving the rights and standing of members, whether in relation to other members, to the Component Societies, or to this Society. All questions of an ethical nature brought before the House of Delegates or the General Meeting shall be referred to the Council without discussion. It shall hear and decide all questions of discipline affecting the conduct of members or of a County

Society, upon which an appeal is taken from the decision of an individual Councilor. Its decision in all such cases shall be final.

SEC. 3. It shall make careful inquiry into the condition of the profession of each county in the State, and shall have authority to adopt such methods as may be deemed most efficient for building up and increasing the interest in such County Societies as already exist, and for organizing the profession in counties where societies do not exist. It shall especially and systematically endeavor to promote friendly intercourse between physicians of the same locality, and shall continue these efforts until every reputable physician of the State has been brought under medical society influence.

SEC. 4. It shall upon application provide and issue charters to County Societies organized to conform to the spirit of this Constitution and By-Laws.

SEC. 5. In sparsely settled sections it shall have authority to organize the physicians of two or more counties into societies, to be designated by hyphenating the names of two or more counties so as to distinguish them from district and other classes of societies. These societies, when organized and chartered, shall be entitled to all the privileges and representation provided herein for County Societies, until such counties may be organized separately.

SEC. 6. The Council shall provide and superintend the publication and distribution of all proceedings, transactions and memoirs of the Society, and shall have authority to appoint an editor and such assistants as it deems necessary. Further, to facilitate this work, it shall be the duty of the Secretaries of the Sections, during each Annual Session, or as soon thereafter as practicable, to deliver to the Editor, or his duly appointed agent, all such proceedings, reports, addresses, papers and other documents, as may have been ordered for publication. All money received by the Council, or its agents, resulting from the discharge of the duties assigned to them, must be paid to the Treasurer of the Society, and all orders on the Treasurer for disbursements of money in any way connected with the work of publication must be endorsed by the Chairman of the Council and countersigned by the Secretary of the Society. All matters of the Society pertaining to the expenditure of money for other purposes shall be referred, during the Annual Session, to the Council, who shall report upon the same within twelve hours, and if the House of Delegates orders the expenditure of money in connection with said report, the payment shall be made by the Treasurer as provided above. It shall be the further duty of the

Council to hold the official bond of the Treasurer for the faithful execution of his office, annually to audit and authenticate his accounts, and to present a statement of the same in its annual report to the House of Delegates, which report shall also specify the character and cost of all the publications of the Society during the year, and the amount of all other property belonging to the Society under its control, with such suggestions as it may deem necessary.

In the event of a vacancy in the office of the Secretary of the Society, or the Treasurer, the Chairman of the Council shall fill the vacancy ad interim until the next meeting of the Council.

SEC. 7. Each Councilor shall be organizer, peacemaker and censor for his District. He shall visit each county in his District at least once a year for the purpose of organizing component societies where none exist, inquiring into the condition of the profession, and for improving and increasing the zeal of the County Societies and their members. He shall make a report of his doings and of the condition of the profession of each county in his District to the Council at its Annual Meeting in January. The necessary traveling expenses, not to exceed twenty-five dollars annually, incurred by such Councilor in the line of duties herein imposed, may be allowed by the House of Delegates upon a proper itemized statement, but this shall not be construed to include his expense in attending the Annual Session of the Society.

CHAPTER IX.—COMMITTEES.

SECTION 1. The standing committees shall be as follows:

- A Committee on Scientific Work.
- A Committee on Public Policy and Legislation.
- A Committee on Nominations.
- A Committee on Arrangements.

SEC. 2. The Committee on Scientific Work shall consist of the President, who shall be the Chairman, the Secretary, and the Chairmen and Secretaries of the Sections. It shall determine the character and scope of the scientific proceedings of the Society for each session, subject to the instructions of the House of Delegates, or of the Society, or to the provisions of the Constitution and By-Laws. Thirty days previous to each Annual Session it shall prepare and issue a program announcing the order in which papers, discussions and other business shall be presented, which shall be adhered to by the Society as nearly as practicable.

SEC. 3. The Committee on Public Policy and Legislation shall consist of three members appointed by the President. Under the direction of

the House of Delegates it shall represent the Society in securing and enforcing legislation in the interest of the public health and of scientific medicine. It shall keep in touch with professional and public opinion, shall endeavor to shape legislation so as to secure the best results for the whole people, and shall utilize every organized influence of the profession to promote the general influence in local, state and national affairs and elections.

SEC. 4. The Committee on Nominations shall be appointed and perform its duties in accordance with the provisions of Chapter VI. of these By-Laws.

SEC. 5. The Committee on Arrangements shall consist of five members of the County Society in the territory in which the Annual Session is to be held, and shall be appointed by the President of the Society. It shall, by committees of its own selection, provide suitable accommodations for the meeting-place of the Society, the House of Delegates, the Council and the Sections, and shall have general charge of all the arrangements. Its Chairman shall report an outline of the arrangements to the Secretary for publication in the program.

CHAPTER X.—ASSESSMENTS AND EXPENDITURES.

SECTION 1. An assessment of **two** dollars per capita on the membership of the Component Societies is hereby made the annual dues of this Society. The Secretary of each County Society shall forward its assessment with a roster of all officers and members to the Secretary of this Society as soon after the annual meeting of the County Society as possible; not later than December 31st.

SEC. 2. Any County Society which fails to pay its assessment, or to make the reports required, on the date above stated, shall be held as suspended, and none of its members or delegates shall be permitted to participate in any of the business or proceedings of the Society or of the House of Delegates until such requirements have been met.

SEC. 3. All motions or resolutions appropriating money shall specify a definite amount for the purpose indicated, and must be approved by the Council.

CHAPTER XI.—RULES OF CONDUCT.

The principles set forth in the Code of Ethics of the American Medical Association shall govern the conduct of members in their relations to each other and to the public.

CHAPTER XII.—RULES OF ORDER.

The deliberations of this Society shall be governed by parliamentary usage as contained in Roberts' Rules of Order, unless otherwise determined by a vote of its respective bodies.

CHAPTER XIII.—COUNTY SOCIETIES.

SECTION 1. All County Societies now in affiliation with the State Society or those which may hereafter be organized in this State, which have adopted principles of organization not in conflict with this Constitution and By-Laws, or with the code of ethics of the American Medical Association, shall, upon application to the Council, receive a charter and become a component part of this Society, subject to the conditions described in Sec. 4 of this Chapter. A roster of its officers and members and the annual dues of \$2 for each member must accompany the application.

SEC. 2. As rapidly as can be done after the adoption of this Constitution and By-Laws a medical society shall be organized in every county in the State in which no component society exists.

SEC. 3. Charters shall be issued only upon approval of the Council, and shall be signed by the President and Secretary of this Society. The Council shall have authority to revoke the charter of any Component Society whose actions are in conflict with the letter or spirit of this Constitution and By-Laws or the Code of Ethics of the American Medical Association.

SEC. 4. Only one Component Medical Society shall be chartered in any county. Where more than one County Society exists, friendly overture and concessions shall be made, with the aid of the Councilor for the District if necessary, and all of the members brought into one organization. In case of failure to unite an appeal may be made to the Council, which shall decide what action shall be taken.

SEC. 5. Each County Society shall judge of the qualifications of its own members; but, as such societies are the only portals to this Society and to the American Medical Association, every reputable and legally registered physician who is practicing, or who will agree in writing over his own signature to practice, non-sectarian medicine only, and to sever all connections with sectarian colleges, societies and institutions, shall be entitled to membership. Before a charter is issued to any County Society, full and ample notice and opportunity shall be given to every such physician in the county to become a member.

SEC. 6. Any physician who may feel aggrieved by the action of the Society of his County in refusing him membership, or in suspending or expelling him, shall have the right of appeal to the Council.

SEC. 7. In hearing appeals the Councilor or the Council may admit oral or written evidence as in his or its judgment will best and most fairly pre-

sent the facts. Efforts at conciliation and compromise shall, however, precede all such hearings.

SEC. 8. When a member in good standing in a Component Society moves to another county in this State, his name, upon request, shall be transferred without cost to the roster of the County Society into whose jurisdiction he moves.

SEC. 9. A physician living near a county line may hold his membership in that county most convenient for him to attend, on permission of the society in whose jurisdiction he resides.

SEC. 10. Each County Society shall have general direction of the affairs of the profession in the county, and its influence shall be constantly exerted for bettering the scientific, moral and material condition of every physician in the county; and systematic efforts shall be made by each member, and by the Society as a whole, to increase the membership until it embraces every qualified physician in the county.

SEC. 11. At the first meeting after JANUARY 1ST, due notice having been given, each County Society shall elect annually a delegate or delegates to represent it in the House of Delegates of this Society in the proportion of one delegate to each FIFTY members or major fraction thereof (see By-Laws, Chapter IV., Sec. 1.) The Secretary of the County Society shall immediately send the list of its delegates to the Secretary of this Society.

SEC. 12. The Secretary of each County Society shall keep a roster of its members, and a list of the non-affiliated registered physicians of the county, in which shall be shown the full name, address, college and date of graduation, date of license to practice in this State, and such other information as may be deemed necessary. He shall annually furnish an official report containing such information, upon blanks supplied him for the purpose, to the Councilor of his District by the **first day of January**. In keeping such roster the Secretary shall note any changes in the personnel of the profession by death, or by removal to or from the county, and in making his report shall be certain to account for every physician who has lived in the county during the year.

CHAPTER XIV.—AMENDMENTS.

These By-Laws may be amended at any Annual Session by a majority vote of all the Delegates present at that Session after the amendment has laid upon the table for one day.

The next Annual Meeting of the Michigan State Medical Society will
be held in Detroit, June 11th and 12th, 1903

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Original Articles

OPTIMISM AND PESSIMISM IN MEDICAL PRACTICE.

DAVID INGLIS,
Detroit.

Some years ago a surgical friend of mine made the cheering remark to me: "You neurologists see a lot of very interesting cases, but you can do nothing for them."

My reply was that if I did not feel that, on an average, I could secure as good results with my patients as my surgical friend was able to secure with his, I would at once take in my shingle and go into the life insurance business.

Again, Diller, of Philadelphia, recently wrote a very readable paper on this singular title: "What is the use of making a diagnosis in nervous diseases, since nothing can be done anyway?" And the remarkable part of his paper was that he found excellent reasons for trying to make a diagnosis, but did not deem it

worth while to dispute the pessimistic summing up of the curability of nervous diseases.

I quote these remarks because I think they typify the attitude of mind held by, not only the great majority of surgeons, but by very many physicians, in regard to the hopelessness of treatment in cases of nervous disease. This has been my reason for taking for my subject to-night, "The Prognosis of Nervous Diseases."

Within the limits of the paper it will, of course, be impossible to take up this subject in all of its possible applications, but it seems to me that it may be of service to us, as physicians—and through us to our patients—if we consider some of the phases of this question which appeal to men who are in general practice.

It is to the general practitioner that almost all cases of nervous diseases apply, at the beginning of their sickness, and it is self-evident that upon the attitude of the general practitioner will depend, to no small degree, the future of the patient.

If this paper is to be of any value it will be because it will, to some extent, controvert the pessimistic positions which were implied in the above curious illustrations of common attitude of mind held by many physicians in regard to the prognosis of nervous diseases. In all seriousness, I believe that such a pessimistic attitude is unwarranted by the facts and that, on the contrary, in the treatment of many forms of nervous disease we have valid grounds for taking a hopeful view as regards the future of the patient and, consequently, for undertaking his treatment with that courage and determination and fixity of purpose which is necessary to success in the treatment of any form of disease.

When we are considering the prognosis of any case, the future of the patient presents itself to us in more than one way. Sometimes the question is simply, "Will the patient live?"; very often the question is, "If he lives will life be a desirable thing to him?" and, in very many instances, the important question is, "To what extent can the patient be restored to a useful and happy life, or to what limitations in his enjoyment and activities must he be prepared to accommodate himself?" The function of the physician is by no means confined to the bare problem of keeping a man alive; it extends much further. It is our province to endeavor to restore men to the most useful and comfortable existence possible to them.

Nothing is more evident, in the study of various forms of disease, than the fact that nature has so ordained it that almost every organ in the body is capable of adjusting itself to very profound changes, and doing so successfully and for long periods of time, providing only that time

be allowed for the adjustment. For instance: the heart is liable to stop suddenly, not alone from some organic affection of the organ, but from sudden alterations in the innervation of the heart, or from a clot of blood forming in it, or from sudden changes in the blood pressure, and yet every one of us has had abundant opportunity to know that, in organic disease of the heart, sudden death is not the rule, but quite the contrary; that it is exceedingly difficult for a man with an organic heart disease to die.

I well remember a patient of mine, who was referred to me by my good friend, Dr. Heaton, who was retiring from practice at that time. He said to me, "Doctor, she has a badly diseased heart, but I confess that I am unable to tell you just what valves are affected." So the doctor and I auscultated with great care and frequency and after every consultation acknowledged ourselves completely baffled to make out what the various murmurs meant. I then took charge of the old lady, and for a period of many years used to study that heart of hers. She became quite interested in the matter herself and told me that, when she died, she wanted me to make a post-mortem and find out what really did ail her heart.

As in so many of these cases, death seemed to come to her with the greatest reluctance; in fact, it was not until cancer developed that she succeeded in dying. When I made the post-mortem I found out why Dr. Heaton and I had been puzzled about her heart murmurs. There was not a valve in her heart that was not affected, and badly affected; but most astounding of all was the atrophy of the ventricular walls. So completely were they wasted away that when I took out the heart I was puzzled to

know which was ventricle and which was auricle. The muscular substance had been reduced to such an extent that the wall of the left ventricle was certainly no thicker than the usual thickness of the left auricle, and yet that flabby, hopelessly demoralized heart had gone on, kept up her circulation and sustained life. Nothing could be more convincing as to the possibilities of adjustment of a damaged organ.

Now this same faculty of adjustment is characteristic of the nervous system as a whole. Consider for a moment the wretched nutrition of the brain cells which must go on in an advanced case of pulmonary tuberculosis. The patient is emaciated to the last degree, the anaemia is profound, the toxicity of the blood must be very great, and yet, once the brain has become accommodated to this condition of things it goes on performing its functions pretty much as if nothing was the matter. Indeed, it sometimes seems as if the consumptive has a mind more brilliant, quick, alert than it was before the patient became sick at all.

In this connection let me call your attention to something with which every one of us is almost certain to be familiar. I refer to the *preservative effects of chronic invalidism*. It seems as if these patients not only succeed in living, but their lives are actually prolonged by their invalidism.

When my father died I inherited from him one of his life-long charity patients. How many years she had been a burden on his shoulders I do not know, but I regarded her as an unfortunate old lady when I began the care of her, twenty-eight years ago. While I thought of her as an old lady, she had a singularly beautiful and smooth white skin, well formed breasts and a plump body. She immedi-

ately became the burden of my life. She was a most unreasonable woman in the demands she made upon the doctor. Every visit was prolonged, and the category of her miseries, ailments and sorrows was gone over with me with an endless repetition. Only her extreme poverty prevented me from abandoning the case almost as soon as I had entered on it. And so it went on until the march of progress made it necessary for their home to give place to a large manufacturing concern. The family moved into a distant part of the city, and I then refused to continue the case. Thirteen years went by, when a young man hailed me on the street and said, "Doctor, there is an old lady connected with our mission church who has been exceedingly anxious to see you. Would you go up and see her, just as a matter of charity?" Imagine my astonishment when I went in and found my old patient. She proceeded at once to tell me her tale of woe in exactly the same manner, and I should say in almost the identical words that I had heard so many times, years before. She still had her white skin and her pretty breasts and her plump arms. Her hair was still brown. She still rehearsed her sorrows; but time had passed her by and "never touched her." Her husband had taken to drink; her daughter was an opium eater—her sons had run away. Her married daughters never came home. The entire family was wrecked, but the chronic invalid had had none of the actual wear and tear of life. I have no doubt that there are many of you who could duplicate this story, who could tell of numerous broken-down mothers and daughters hastened to an early grave, while the invalid who had been the cause of it was perfectly well preserved.

As a further illustration of this same preservative effect of chronic invalidism. it is interesting to note the longevity of patients in our insane asylums. In every insane asylum there will be found patients whose nervous system is damaged—badly damaged—and yet, once the re-adjustment has taken place, these patients will outlive the ordinary expectation of life. They seem to be positively shielded from the actual damage to which a normal nervous system succumbs.

Some years ago an esteemed medical friend, who happened to have some very bad cases of hysteria at the time, read a paper before one of our societies in which he took the ground that hysteria was a very grave and incurable disease. I was very much struck with the paper at the time, because it seemed to me to be so exactly opposed to the facts.

Hysteria is a very prevalent disease; very large numbers of young people of both sexes—particularly females, however—exhibit at some period of their lives phenomena of hysterical affection. There is, for the time being, a profound alteration in the functional activity of the cerebral cortex, and at times the bodily symptoms seem to be of the most threatening sort; nay, more, not a few cases of hysteria show remarkable persistency in certain isolated phenomena. Cases of hysterical paralysis, and particularly cases of hysterical contracture, will endure for not only months, but years, and yet the curious fact remains that hysterical patients seldom die, and, with the rarest exceptions, they all recover. Even in the extreme cases of hysterical contracture, which have lasted for years, the outlook is by no means an unfavorable one. In some

of these cases the assistance of the surgeon needs to be called in; tendons are required to be cut, unused muscles require to be stimulated, but the year-long habit of contracture is capable of being broken into with the greatest rapidity.

It is important that we, as physicians, should recognize this, because it is precisely in these cases that quacks of all sorts, faith curists, christian scientists, bone-setters, osteopaths and enthusiasts of various sorts will take these cases, after regular physicians have pronounced them incurable, and bring about a cure which is genuine and complete.

Closely related to the prognosis of hysteria is the prognosis of neurasthenia. No class of patients, who consult the doctor, constitute a greater strain upon the vitality of the physician than do those cases of nervous exhaustion. For themselves they are very generally hopelessly pessimistic, and yet my own feeling, in regard to the great majority of cases of neurasthenia, is such that I enter upon the care of a case with cheerful and heartfelt enthusiasm. This does not mean that the physician is justified in expecting to work any miracles, nor does it justify the physician in leading the patient to expect any sudden or rapid restoration to comfortable life, but if the physician himself be gifted with an optimistic spirit, and if this spirit begets within him a courage which he can gradually infuse into the patient, if he can thoroughly win the confidence of the patient, and if then he can summon up a variety of resources, it is fair to look forward to a time when the patient will not only have gotten through his neurasthenia, but shall have gotten past it; when he shall look back upon his siege of nervous

exhaustion as a miserable thing in his past life. Very many of these patients, if they can be induced to follow the physician's plan steadfastly, can be restored to what can fairly be called perfect health. There are, however, not a few of them who must content themselves with a readjustment of their nervous expenditure to a more limited scale.

I remember a young lad who inherited \$27,000. Inside of three years his capital had disappeared, and he came to me to ask me to help him find a job. I found him not one, but three jobs; but steady labor to a \$27,000 young man proved irksome, and he was not a particularly well qualified employe. I finally told him that he must not visit me at my house or my office any more until he could come to me and prove, by doing it, that he could earn his own living. When he could do that he would be welcome again. Time went on, and the young man turned up neatly dressed in a very plain and inexpensive suit and said, "I have not come to ask for help, but to tell you that I have been earning my living and have had my salary raised twice in the last year." It is safe to say that the young man's mode of expenditure had materially altered. A large proportion of our neurasthenic patients have expended their nervous energies much as my young man spent his \$27,000. American men and women seem to think as he did—that they have an unbounded capital. It never occurs to them that a wise man spends his income and not his capital. If neurasthenic patients expect that they can be restored to such a degree of nervous vigor that they can resume their old habits and spend their capital without again becoming bankrupt, they are doomed to disappointment, but that under wise man-

agement almost all neurasthenics can be restored to useful life, and a happy one, I firmly believe.

There is one phase of the prognosis of neurasthenia which it is well to consider, and that is this: After exhausting diseases the whole body is often exceedingly debilitated. During the convalescence the problem before us is always that of securing prompt and perfect restoration of all the organs to their normal functional activity. Now, nothing is more certain than that it is a comparatively easy task, in many instances, to secure the restoration of the body weight, of the muscular bulk and the organic effectiveness of most of the bodily organs; but the re-accumulation of that surplus nervous energy which is essential to the normal activity of the cerebro-spinal axis is a much slower process. The importance of bearing this fact in mind is great, for upon it will depend the instructions we give the patient in regard to the resumption of the nervous expenditures. Take, for instance, a case of typhoid fever; notice how rapidly, during convalescence, the bodily weight is regained, the patient regains his color and, apparently, his muscular strength. In fact, it very commonly happens that a young man who has run through an attack of typhoid fever and has completed his convalescence, not only looks as well as he did before he had the typhoid, but will weigh perhaps ten pounds more than he ever did before in his life. People congratulate him on his excellent appearance, and the most natural thing in the world is for him to think that he is ready for any kind of activity, any amount of work, but while all this has been going on the restoration of nervous energy has been by no means as rapid nor as complete. It

takes a long time for a typhoid patient to get his nervous energy fully restored, and many of these cases have the unfortunate experience of breaking down their nervous system by attempting tasks for which the nervous system was not at all prepared. There is no necessary correspondence between the body weights, the general appearance of health and the actual reserve nervous energy of an individual.

Many of our neurasthenic patients are bodily fine to look at, and it requires a distinct effort for the physician to realize that the patient must be managed by keeping in view not his bodily appearance but his actual nervous reserve, and in our management of convalescents it is only by keeping this fact in mind that we will be able to guard the patient against a premature expenditure of nervous energy, which is liable to be exceedingly damaging, and is sometimes permanently so.

There is probably no form of nervous disease in which the question of prognosis plays a more important part than in that of traumatic neurasthenia. In the ordinary forms of nervous prostration the pessimism or optimism of the attending physician has a tremendous influence upon the future of the patient, but in all of those forms of traumatic neurosis in which suits for damages are concerned the attitude of the physician, from the moment that he is called to attend the case, plays an exceedingly important part.

Let us suppose that the physician, who first has charge of the case, recognizes the strong tendency of all neurasthenics to exaggerate their own miseries. Acting on this basis he makes as light as possible of the patient's subjective sensations, carefully abstains from asking him whether he has had this or that symptom, which

the patient has himself not mentioned, reassures the patient heartily as to the hopefulness of a speedy recovery, and, as soon as he can with safety do it, urges the patient to gradually increase the use of his powers; all my experience goes to show that, were this the usual course to be pursued, very many patients who have been injured would make a speedy recovery—so speedy, in many instances, that they would not think it worth while suing for damages.

What is the usual course? The attending physician pursues directly the opposite plan. In a natural, but most unfortunate, effort to be thorough in his examination of the patient, he begins to suggest new, and, to the patient, hitherto unknown symptoms which may reasonably be expected to occur after such an injury. Instead of trying to make the patient dwell but little on his symptoms, the physician, by constantly asking about each individual symptom, calls the patient's attention to it. By the time that a lawyer has gotten on to the track of the case and begins his exceedingly suggestive methods, the combination is complete. Between the patient's own injuries, his emotions, his hopes for large damages and the suggestion furnished, by the lawyer consciously and by the doctor unconsciously, the patient is almost certain to embark on a long career of unnecessary invalidism. It is not at all a question of the patient's essential honesty of purpose. No man can practice medicine without the keenest realization of the part that suggestion plays with very many of our patients, and, in these cases of traumatic neurasthenia, the combination of suggestions has a most disastrous effect upon the patient. Even the most honest of men, when he has be-

come thoroughly convinced that he has been very badly damaged and realizes that the time for the trial of his suit is not far ahead of him, finds it almost impossible to wish for or to attempt to be thoroughly cured before the time of the trial. It is simply human nature that, having been miserable for so long, he should want to be in a position to convince the jury, at the time of his trial, just how badly used up he has been. When the trial is over and the verdict settled for good the whole scene changes. The lawyer has no inducement to make any further suggestions, the patient has the rest of his life to look forward to; all of the inducements there are tend to make him wish for complete and speedy recovery. The physician may now go on with the treatment, on essentially the same lines which he carried out before, and there are not a few of us who have had the experience—and an exceedingly mortifying one it is—of testifying that, in our opinion, the patient's damages were permanent, only to find that within a comparatively short time the patient was restored to a reasonably useful life, and, occasionally, to our extreme chagrin, to perfect health.

At first we are apt to think that the patient has been thoroughly dishonest and that we have been totally bamboozled. This is not always the true explanation. The fact is that before the verdict our therapeutic measures were steadily nullified by the manifold suggestions tending to keep up the patient's invalidism, and after the verdict all of the suggestions tended in exactly the opposite direction. The moral of the whole thing is that the attitude of the physician from the first moment that he sees the patient should be such that at the last he can have a clear conscience that, at least, it was none of his

suggestions which helped to retard the patient's recovery.

This brings up the question of the physician's testimony on the trial of the case. All of the pressure of the plaintiff's attorneys, his friends and his own is brought to bear to make the attending physician take the view that the damages, real enough as they may be, are likely to prove permanent. The fact is that, just as it is the rule, to which there are comparatively few exceptions, that neurasthenics do recover and are finally able to carry on fairly useful lives, so it is true of the traumatic neuroses that no matter how great the disability at the time of the trial, the greater proportion become again capable of leading fairly useful lives. A small number remain permanently and hopelessly incapacitated. A very large proportion will retain some partial disability for many years, if not for life; but even these will be able to fill useful positions in life and extract a reasonable enjoyment from it, and a very considerable proportion of the cases can be said to make complete recoveries.

In speaking of the prognosis of nervous diseases I wish to call attention to the matter of surgical treatment of neurotic patients. We have been passing through an era of great surgical enthusiasm in the treatment of reflex neuroses. We are, all of us, familiar with the remarkable results which have been secured, in many of these cases, by surgical measures, and, yet, bright as the picture is, it has an exceedingly somber background. That background consists of blasted hopes.

From the surgical point of view the operation may have been a complete success and yet the expectations of the patient may not have been fulfilled; the cure of the nervous condition has not followed the operation; the patient is disappointed. If

this were all, both physicians and patients could learn to accept the thing philosophically. Unfortunately, however, the result of the operation is much worse than this in cases of failure. To the mind of the average layman a surgical operation looms up as a great and dangerous thing, a thing to be undertaken only as a last resort. Now, if a patient suffering from some neurosis is led to expect, either by direct promise or, more often, simply by implication, that the operation will cure the neurosis, all other things sink into insignificance in his mind in comparison to the operation. One who has had the operation done has made use of the last resource. If it fails he is apt to fall into a condition of absolute hopelessness. I do not mean that the surgeon promises to cure; he may, even, tell the patient explicitly that he cannot promise a cure, but the moral effect of the operation upon the patient remains the same; he has tried the last desperate resource and failed.

There are no patients who fall into the hands of the neurologist who tax his patience and draw upon him for moral support as do these post-operative cases. Many of these cases are entirely curable and are, finally, cured, but it takes a tremendous amount of effort and long and patient building up of the patient's confidence before such a patient can be convinced that there is still hope for him. Time and time again I have seen patients, of this sort, who were condemned to lifelong invalidism, in whom hope could not be resuscitated and who, I firmly believe, might have been restored to health had a surgical operation not been done upon them. It is well to emphasize this, for, unless a surgeon can see a very reasonable probability of cure of the neurosis from the operation, he ought to refrain from do-

ing it, if the only reason for the operation is the possible benefit to the neurosis. In other words, a surgical operation ought never to be done for the cure of a neurosis because the surgeon thinks that the operation can *possibly* do some good. He ought to have a very strong assurance that it *probably will do good*.

In this connection let me allude to one particular phase of surgery as we sometimes see it. Not a few hypochondriacal patients become convinced of the reality of some imaginary defect in this or that organ. Very commonly their attention is fastened upon the sexual apparatus. This occurs, I think, quite as often in males as in females. So strongly is the patient's attention fastened upon this distinctly localized ailment that the suggestion comes very readily to the mind of the surgeon that if a fictitious operation be done purporting to remove the imaginary difficulty the whole mental and nervous tone may be changed. Now we can none of us doubt the valuable results that very often follow upon wise suggestion upon the part of the attending physician, and it is at once evident that a surgical operation, such as I have mentioned, naturally constitutes one form, and a very powerful one, of suggestion. The temptation is very great to attempt an operation for its suggestive effect, and yet it seems to me that a strong protest should be made against such measures. First of all the difficulty with the hypochondriac is not in the locality where he imagines his ailment to be, but is far more deeply seated. It is a defect in his mental mechanism. It is a very common thing to be able to watch the process by which a hypochondriac will himself change the location and nature of his imaginary complaint, and there is no guarantee that the operation will material-

ly change the fundamental condition of the hypochondriac. An operation, for instance, upon a perfectly insignificant and harmless varicocele may, indeed, convince the patient that his sexual apparatus is all right, but within a short time he may have an equally strong conviction that he has a serious disease in his kidneys. In short, surgery of this sort cannot keep up with the varying ideas which possess his mind.

The question, however, is much wider than simply the hopelessness of these operations. If the patient finds that the operation has been done purely as a matter of suggestion, he loses confidence, not only in the surgeon who deceived him but in the medical profession as a whole, and, worst of all, the moral effect upon the community at large is thoroughly bad. All medical men are regarded with a distrust because of surgery of this sort. When we watch the prevalence of christian science, Dowieism, and quack doctors of all sorts, it is not enough that we condemn them but it is always well to examine ourselves and see whether it may not be that members of the medical profession are not educating the public into a distrust of regular medicine, grounded upon methods that are not altogether above reproach.

A few words in regard to the prognosis of an affection which always comes under the care of the general practitioner before a specialist sees it—infantile paralysis.

Here we are dealing with a disease which leaves an indelible mark behind it. It is one of the diseases which leads physicians to form the exceedingly hopeless views of the curability of nervous diseases suggested in the remarks at the opening of this paper. And yet, even in these cases, the physician who is gifted

with hopefulness and who has therefore determined to use all of the resources at command for the improvement of the patient, will succeed in attaining results which can by no means be attained on any other basis. While it is particularly true that, in this disease, certain neurons are entirely destroyed and that certain groups of muscles are badly atrophied, that a damaged member, say the leg, fails to grow as its fellow, yet it is also true that, as the child develops, even the damaged leg does grow, to a very material extent, countless thousands of new muscular fibres develop in the damaged leg with the natural process of growth. Now the hopeful physician acts upon the principle that, in a growing child, if certain nerves and muscular fibres are damaged or destroyed, other muscular fibres, with their nerve connections, may be stimulated to grow and, to some extent, at any rate, take the place of those that are destroyed; always looking forward to maintaining the greatest possible use of the leg, he carefully prevents the deformity, which will inevitably follow from the contractions of the muscles opposing those destroyed, and it is astonishing to what an extent persistent, careful and energetic treatment can succeed in preventing deformity and securing a reasonable use of the limb. Whenever I see a frightfully distorted limb, with the history that it originated from infantile paralysis, I feel that I know the man who treated the case at the outset. He was a pessimist who put his hands in his pockets, concentrated his attention upon the defective pathological changes in the cord, and failed to avail himself of the power of growth which was in the child, and which only needed to be wisely directed in order to prevent, to a considerable extent, the disastrous result.

In talking with the superintendent of one of our insane asylums, some time ago, he stated that he had never seen a case of epilepsy cured. Here again is an instance of the hopeless attitude of the medical profession or of a number of its members. As he saw epilepsy, in the insane asylum, I have no doubt that his statement was absolutely correct; but that we should all of us regard epilepsy as an incurable disease is a radical mistake. While it is true that no conscientious physician dares promise a cure, in any given case of epilepsy, yet it is equally true that a fair proportion of cases of undoubted epilepsy, and even of cases which have gone on for long periods of time, are cured and can honestly be said to be permanently cured.

Here, again, success or failure is to no small extent determined by the primary attitude of the attending physician. If the attending physician regards the disease as incurable it is natural that he should carry out the routine treatment, recommended by the text-books, saturate the patient with bromides, and go on giving bromides until the patient stinks; he will regard the progressive mental enfeeblement as the result of the epilepsy, and the inevitable result is that, after a time, the patient drifts out of the hands of the regular physician and into the practice of taking some one or other of the many well advertised specific cures for epilepsy. The whole thing is a cause of but little pride to the medical man and of little honor to the profession, and, the more particularly, because it not infrequently happens that patients, whose cases have been pronounced incurable by a regular physician, are cured, and stay cured, and attribute their recovery to some patent medicine or some quack. The man who feels that epilepsy is a curable disease is not likely to fall into the serious error of

a routine, blind and dogged use of bromides and feel that if they fail he is at the end of all his resources. He will study his case carefully, regulate the patient's entire hygienic surroundings, his mode of life, his activities, his diet, and at least be certain that the drugs he gives do not do the patient more damage than the disease itself, and he will have the satisfaction of seeing not a few unfortunates restored to happy lives.

The prognosis of locomotor ataxia is ordinarily spoken of as being practically hopeless. I think the general idea is that we are dealing with a disease which not only is incurable but which is progressive and that it is a mere question of time—and not such a very long time—before the patient will be brought to a condition of absolute helplessness. I think that the ordinary phraseology of our text-books justifies such an idea. And yet the curious fact remains that locomotor ataxia is a disease for which proper treatment is capable of accomplishing much.

It is perfectly true that once the patellar reflex is entirely lost, the ataxia distinctly developed, the patient can never be cured in the sense that he will regain his patellar reflexes or that he will be entirely free from his inco-ordination, but under a persistent treatment which is animated by a hopeful prognosis it is astonishing to what an extent even profound cases of locomotor ataxia can be so far benefitted that we can restore them to a reasonable degree of useful and comfortable life.

I remember to have been consulted, eleven years ago, by a gentleman whose locomotor ataxia had progressed to such an extent that he was, at the time, unable to attend to his business. The lightning pains from which he suffered were something atrocious; his ataxia was so pro-

found that he only got about with two canes and that with great difficulty. He had ocular symptoms, double vision; in short, according to the books, he ought to progress in no very long time to a condition of bed-ridden hopelessness. The fact of the matter is that now, in the year 1902, he is conducting a large and responsible manufacturing business of which he is the sole proprietor. The last time I met him, going to New York, he came walking through the train. He was the picture of health, was able to navigate the moving train, carried no cane. When I asked him how he was getting along he said, "I am all right." He said, "I have a blast of pain occasionally, but I have had that so long I have gotten pretty well used to it." When I tried his reflexes they were, of course, lost. Here was a man who, according to the books, should have died, and, had the prognosis been a hopeless one, eleven years ago, I think he would have died according to program.

It is a curious fact that if a medical practitioner makes a diagnosis that the patient is suffering from some form of cerebral, or particularly spinal, syphilis, if the diagnosis is made of a gumma, the practitioner has generally quite a hopeful disposition. The doctor goes at the patient vigorously with iodide of potash and such other measures as may seem wise to him, and rather expects that the man will get over his more or less pronounced brain or spinal lesion. Why we should be so hopeful in a case of organic syphilitic disease and so pessimistic when we are dealing with non-syphilitic lesions has always been a mystery to me. We are not at all surprised to see a large uterine fibroid shrink away to a very great extent. We rather expect to see the boy whose hands are covered with warts, even very large warts,

wholly lose them after a time. Various other neoplasms come and go. The fact of the matter is that the connective tissue formation which occurs in locomotor ataxia is capable of going through precisely those same atrophic changes that take place in the gunnua or in the different instances that I have named.

I am satisfied that, in not a few cases of locomotor ataxia, the original sclerotic area diminishes very markedly in size. Now if there is anything characteristic of locomotor ataxia it is this, that in the midst of the sclerosed area the conducting fibres are not destroyed until a very late period; year after year, while the sclerosis endures, the patient will suffer from the lightning pains, but the very fact that he suffers year after year shows that the fibres are still capable of sending up their impulses; otherwise he would have an anaesthesia instead of his pains.

These considerations in regard to locomotor ataxia lead directly to the question of treatment. It hardly needs to be said that if the medical man feels that the prognosis of locomotor ataxia is hopeless he will confine himself to that mode of treatment which is at the same time easiest for the physician as well as for the patient. It is so easy to give the patient anodyne drugs for his lightning pains as long as the effect of the drugs is not worn out. The inevitable next stage is that the patient begins to drift from doctor to doctor, and from doctor to quack, and from quacks to patent medicines. If, on the other hand, the physician recognizes that, in the midst of the sclerosed area, the conducting fibres are still capable of conducting, if he bears in mind the well known facts, of the regeneration of cut nerve fibres and the fact that for one nerve

cell which is fully developed and in active service there lie, all about it, numbers of undeveloped nerve cells and that these cells can and do develop and take on new functions, the possibilities of therapeutics begin to take on another aspect.

The treatment of locomotor ataxia does not consist in the use of iodides and mercurials and opiates only; in fact not a few patients are damaged more and more by the blind and dogged use of these drugs. Put a locomotor ataxia patient on a course of thorough general physical upbuilding; give him tonics, improve his digestion to the utmost point, securing the most satisfactory assimilation of food products. Surround him with the best hygienic influences and then put him on a course of carefully planned and persistently carried out, and gradually increased, muscular exercise, and it is simply remarkable to note to what an extent a shambling, uncertain and useless ataxia patient can be restored to useful, and not ungainly, control of his legs. Ataxia is by no means a hopeless condition. The gentleman I mentioned, already, so completely recovered from his ataxia that he walked through a moving train of cars without attracting any attention, and as he walked about the streets, a busy man, no ataxia could be noticed, and yet when I first saw him he got about a few steps, with the aid of two canes, with the greatest difficulty. There was no miracle about it, but the man was treated with persistency begotten of a reasonable optimism. The ataxic muscles were trained to co-ordinate movements. It is strange that this training of ataxics has not attracted more attention than it has, in view of the fact that we have long been familiar with the marked improvement, which can be brought about, in chorea, by systematic and persevering gymnastic

training. The problem in both cases is essentially similar.

I have taken up, gentlemen, a few of those forms of nervous disease which come into the care of the general practitioner; cases which the general practitioner is always called upon to treat first of all, and have tried to show, not only that very many nervous diseases are curable, but it has been my desire to emphasize, above all, the fact that the curability of the case depends in very large measure upon the mental attitude of the attending physician. For good or evil the patient's career is largely determined by our own attitude towards him. If we accept the hopeless view we, to no small extent, doom the patient to a damaged, defective, miserable life. If, on the other hand, we feel that the nervous system is but a part of the whole organism and that, like all other parts of the human organism, it is endowed with a power of adjustment to changed environment and that, consequently, even though damaged, it can readjust itself and carry on its functions in a useful way, we will be to our patients a blessing, and the practice of medicine will be to us a constant satisfaction.

DISCUSSION.

W. J. HERDMAN, ANN ARBOR.

I regard the subject of this paper as exceedingly timely, and I am very glad it was read in the section on general medicine, because I think that such sentiment is more needed by the general practitioner than by the neurologist, although the doctor has quoted some neurologist as having given a pessimistic opinion.

A large share of nervous disorders are those of functional derangement. Now an optimistic opinion with regard to the curability of these functional derangements usually creates an optimistic impression of methods of treatment; and my own experience corresponds with that of the doctor, that in the majority of these cases,

rightly studied, rightly dealt with, they are curable. The curable element, however, or the line of cure, is largely that of suggestion, and the attitude that the physician bears to his patient; if he has a spirit of hopefulness it is bred in the patient, and the attitude of mind with reference to these functional disorders is very important in effecting a cure.

The only thought that I wish to add to this pessimistic conception of the incurability of nervous disorders for the benefit of the general practitioner is this: those cases that cannot be cured are those of derangement of an organic character, changes in structure, which come to the neurologist oftentimes, because they have been too long in the hands of the general practitioner before they reach the neurologist. The neurologist is constantly endeavoring to show the early symptoms that induce organic changes in the spinal cord, and in the brain, which, when they reach him in that state, are incurable. The only thing he can do then is to make the patient's condition as comfortable as possible. Now if those conditions are recognized early enough, they also are curable. One of the most unsatisfactory forms of spinal disorder, which results in permanent disability, and oftentimes long life, along with that disability, is primary lateral sclerosis. It has been my fortune in the last three or four years to find several cases of primary lateral sclerosis in their early stages. They have been cured, but they are not the disorders which, as a rule, produce any great amount of discomfort, and in the hands of the general practitioner, not having sufficient experience in that line, are looked upon as rheumatic disorders, in the early stages, until they become settled in the secondary stages, when organic changes occur, and then it is exceedingly difficult to do anything, and when they reach the tertiary stage it is impossible to do anything; and yet those cases last with a fair degree of health 20 or 30 years. I have found in the primary stages they are curable. Now the thing for us all to learn from this paper, I think, that is most important to us, is to recognize the tendencies in their early stages and then get the benefit of the specialist upon methods of cure in those stages. If that is done I think we can get a much more optimistic view, even in that class.

But as regards the functional disorders, if we have lost hope in the possibility of curing them, our methods of research and methods of treatment will never be approved. But I fully believe that these cases of epilepsy, hysteria and neurasthenia are curable in the majority of cases.

DAVID INGLIS, DETROIT.

I am glad that Dr. Herdman brought out the matter he did about primary lateral sclerosis.

If I can impress upon general practitioners who see cases of infantile spinal paralysis the same idea which Dr. Herdman emphasized in regard to primary lateral sclerosis, it may be of some benefit to many a child.

We see these unfortunate children growing up frightfully deformed. Whenever I meet a case of great deformity, the result of an infantile paralysis, I feel as if I personally knew the doctor who attended the child in the beginning.

The doctor was probably a man who said, "This is one of those hopeless diseases of the nervous system." He was a man who had the idea that nervous diseases are incurable, who, believing that nothing could be done, put his hands in his pockets and did nothing. Now the fact is, that if the man who takes charge of the case at the beginning has some hopefulness about him, if he remembers that the spinal cord of that child is bound to grow just as the child grows, that countless new cells in his spinal cord are going to develop and take up their activities—if, remembering these undeniable facts, he will go ahead and treat a case of infantile paralysis, not for a few weeks, not as a matter of form, but energetically, with a dogged persistence which keeps up with the growth of the child, I believe that the great majority of these cases of infantile paralysis could be drilled and trained and made to grow so that they would be spared from the wretched deformity. There is nothing that pains me more than the pessimism of doctors who let a case of infantile paralysis come to that result.

I am exceedingly glad that Dr. Herdman felt that I had told the truth as he saw it, that we have a right to be optimistic, and that when we are not optimistic we do the patient an irretrievable damage.

Owing to the rapid changes made in the membership of the State Society, the names of some of the new members may have been unintentionally omitted. If any member has not received his JOURNAL, the editor will be pleased to have his attention drawn to the omission.

The first meeting of the surgical section of the Wayne County Medical Society was held on the evening of November 3.

THE VALUE OF PLASTER CASTS
FOR ACCURATE CASE RECORDS
AND AS AIDS IN THE TEACH-
ING OF THE DIFFERENTIAL
DIAGNOSIS OF ABDOMINAL
TUMORS. WITH DEMONSTRATIONS.

REUBEN PETERSON,
Ann Arbor.

I would like briefly to call the attention of the members of the Section to some work which has been carried on during the past year in the gynecologic clinic of the University of Michigan Hospital. I refer to the taking of plaster casts of abdominal tumors and other pathologic conditions with a view of their use in the teaching of differential diagnosis and their preservation as accurate records of cases. While experience has given rise to not a few changes in the technique of the cast making, these two ideas, responsible for the undertaking of the work, have never been lost sight of.

No matter how good may be the verbal or written description of the limits, shape and contour of an abdominal growth, it can never be so realistic or so accurate as a plaster cast of the same tumor. The cast, moreover, is an imperishable, true reproduction of certain gross characteristics of the tumor, in such a shape that it can be made use of by another observer, perhaps for different purposes, years after it has been made.

For teaching purposes I have found such a cast invaluable. As an illustration, allow me to mention an incident that occurred while trying to have a class arrive at a diagnosis of a certain abdominal swelling. I asked the student why such a swelling could not be caused by an ovarian cyst. His reply was that an ovarian cyst would be at one side of the abdomen while

this growth was central and symmetrical. Instead of asking him to try to remember that after a certain period in its growth an ovarian cyst was apt to be central in position; I sent for the cast of such a tumor, which had been operated upon before the class, and had been proved to be ovarian and demonstrated the central position of the growth.

At first the mistake was made of making the casts too small, including only the tumor area. As more skill was acquired the area of the cast was increased until now the bony landmarks above, below and at the sides are all included.

Only the exceptional patient will object to having the cast made. This statement refers to private as well as hospital cases. Some of the most interesting and instructive casts have been from patients in private practice.

There is no pain connected with the process of taking the cast, even where the tumor is quite sensitive to the touch.

The technique of the process is quite simple. The finest dental plaster should be used. Coarser varieties will be found very unsatisfactory. The part should be carefully shaved and covered with a layer of sweet oil to prevent the plaster from adhering. The plaster should be mixed in cold water, the quantity of the latter depending upon the amount of plaster needed. The ordinary bread pan will be found convenient for the mixing. The plaster is poured into the center of the water, the mixing being done very gently and lightly with the hand, not a spoon. As soon as a cup full of plaster is mixed in this way another cupful is poured into the center of the water and so on until all is the consistency of thick syrup and is ready to be poured upon the surface to be taken. The plaster can be confined to any desired

area by a devise suggested by Dr. D. M. Cowie, a simple bicycle tire filled with shot. The weight of the shot causes the tube to hug the skin closely and allows of its being easily held in place. The plaster is poured into the area enclosed by the loaded tire until it rises to its top. As the plaster runs in, any bubbles should be pressed out with the fingers. The plaster hardens quickly, and after a little practice the cast can be removed without breaking, and the negative is made. It only remains to grease this negative, using butter instead of oil, and from it the positive may be taken. It is best to allow the cast to set for twenty-four hours before trying to separate the negative and positive. It is usually necessary to destroy the former in order that the latter may be removed intact.

I have brought with me a number of casts for the purpose of illustration. Here are three casts of cases of uterine fibroids, all of which have been subjected to hysterectomy. They represent different stages of growth, from the first appearance above the pubes until it reaches above the umbilicus.

Here is the cast of a procidentia in a woman who was between four and five months pregnant. Here is another case of procidentia in an unimpregnated uterus. It needs no further words from me to convince you that these casts are far better than any description could hope to be.

Here also are casts representing different stages of the pregnant abdomen. While they do not take the place of the living woman whose abdomen the student is taught to palpate, they are of great value in teaching.

I have also had paper maché models made of certain of the casts with a view of making them lighter. Up to the pres-

ent time, however, the lightness is the only advantage as they are far uglier and much less attractive than the plaster casts.

"SEQUELAE OF OPHTHALMIA NEONATORUM."

DON M. CAMPBELL,
Detroit.

The following clinical reports are made to this Section because in the writer's experience they embody some unusual pathologic results of a disease which is at once one of vast importance to the medical profession and also to the state.

The surgical procedure resorted to for the correction of the resulting deformities present also, in the writer's opinion, some points of more than passing interest.

Ophthalmia Neonatorum is, it has been estimated, responsible for the presence in the blind asylums of this country of about one-third of all who occupy these eleemosynary institutions, which aggregate is a considerable burden upon the taxpayers of the state from a financial standpoint, to say nothing of the loss of many individuals who otherwise would be useful and more or less ornamental members of society.

In not a few states of the Union legislatures have taken cognizance of the importance of the situation and made it a misdemeanor, punishable by imprisonment or a fine, for any nurse or midwife in attendance upon such a case to fail to report the same to a medical man.

Michigan has not, as far as I am aware, enrolled herself in this list of progressive commonwealths. Undoubtedly it needs only the backing of such an institution as the Michigan State Medical Society to receive favorable consideration at the hands of the proper authorities.

Under modern, rational and radical methods of treatment, almost all cases of Ophthalmia Neonatorum—please note that I say almost all cases—whether of gonorrhœal or other origin, will make a perfectly complete and uninterrupted recovery, no complication supervening and no sequelae following.

The following two cases under these circumstances seem worthy of report and record:

CASE 1. Ophthalmia Neonatorum—followed by total entropion of right upper lid—Operation—cure. The patient, a baby of three months, well nourished and growing satisfactorily, was brought to me in November, 1899, with the history of having run through a severe attack of Ophthalmia Neonatorum, one eye recovering completely and the original disease in the other also responding satisfactorily to treatment. When, however, the purulent conjunctivitis had subsided it was found that there was an almost complete entropion of the right upper lid. Upon examination the lid border was found to be completely inverted and the whole row of lashes was seen to be scraping with each movement of the lid upon the cornea, thereby producing considerable irritation, redness, lachrymation and discharge.

The following interesting pathologic condition was found: The skin surface of the lid showed a scar where an ineffectual attempt had been made to remedy the defect by excising an elliptical piece of skin and closing the wound with sutures. Upon everting the lid a firm adhesion of the fornix conjunctiva to the palpebral conjunctiva as far forward as the free border of the lid was found and it was evidently from the traction of this adhesion that the lid was being inverted and made to assume its abnormal position.

The following surgical procedure was instituted for the relief of the abnormality, which of course if left to itself would eventuate in the loss of the eye.

Under chloroform anaesthesia and after proper aseptic cleansing, the conjunctival adhesion was carefully freed and completely dissected up. The lid was then allowed to assume its normal position and a Hotz's Anagnostakis Entropion operation was done, the procedure being as follows: An incision was made through the skin parallel to and a little below the upper border of the tarsal plate from one canthus to the other. The flap was dissected up as far as the free border of the lid. Then with three sutures the upper border of the skin flap was sewed firmly to the upper border of the tarsal plate, the sutures being brought out in such a way as, when tied, to ensure the complete closure of the operative field.

The third and last step in the procedure consisted in the transplantation of a mucous membrane flap from the lip of the fater to the raw surface left by the dissection of the conjunctival adhesion. The mucous membrane flap "took," the healing of the skin wound was by primary union and the result eminently satisfactory, the lashes assuming their normal position.

This case was briefly reprinted in the *American Journal of Ophthalmology*.

CASE 2. Ophthalmia Neonatorum—Perforating Corneal Ulcer—Secondary Glaucoma—Buphthalmos—Mules' Operation—Recovery.

In June of 1901 this child, then twelve days old, was placed under my care.

A careful examination showed a violent purulent conjunctivitis, and the right cornea the seat of an extensive infected ulcer, more than one-half the corneal surface being already involved.

The purulent conjunctivitis went on to recovery in about the normal way, but the corneal ulcer perforated Descemet's membrane and the interior of the eye became infected.

However, instead of going on to panophthalmitis and subsequent atrophy, as one would naturally expect, the infection became limited, the corneal perforation healed, with prolapsed iris and obliterated infiltration angle.

Secondary glaucoma supervened and the eye gradually distended until it was fully three times the size of its fellow, which meantime had made a perfect recovery.

The deformity of this extremely large and constantly distending eye was very great and demanded immediate surgical relief.

Should enucleation, simple evisceration or Mules' operation be performed?

The first was rejected because of the arrested development which such a procedure in one so young would be sure to induce.

Simple evisceration was rejected because it is but little better than enucleation.

A Mules' operation was decided upon as offering the best cosmetic result and at the same time interfering the least of any with the growth of the orbit and side of the face.

The cornea was ablated, the contents of the globe carefully removed and into the scleral cup a silver sphere of suitable size was introduced.

Six sutures were passed through the sclera and four through the conjunctiva. There was practically no reaction, the healing was prompt, uninterrupted, and the child now has a large movable stump,

on which he has for six months worn an artificial eye.

The result from a cosmetic and surgical standpoint is particularly good and there is practically no secretion in the orbit.

I wish to call particular attention to the extremely young age of this patient at the time the Mules' operation was performed. The child was four and one-half months old when the Mules' operation was done.

In this connection I wish to report in some detail another case which, while not one of Ophthalmia Neonatorum, is one of the same disease occurring in an adult:

CASE 3. Mrs. K., aet. forty. Gonorrhoeal Ophthalmia—Trachoma—Entropion of lower lid. Infiltration—Anaesthesia—Operation—Recovery.

This patient was admitted to my service at Harper Hospital and presented all the classical signs of a violent purulent conjunctivitis. Bacteriologic examination of the discharge showed abundant gonococci present, making the diagnosis of the original infection, which had taken place only a few days previously, very clear.

Under appropriate treatment the violence of the gonorrhoeal infection subsided without any corneal complication supervening.

Instead, however, of going on to resolution in the usual way, the palpebral conjunctiva passed into a condition clinically identical with and indistinguishable from trachoma, which observation would tend to confirm the opinion which has been advanced by some that trachoma is a modified gonorrhoeal infection.

Another interesting feature of this case was the occurrence some months later of a complete entropion of each lower lid, which also strengthens the identity of the two diseases.

The entropion was relieved by surgical means, the operation being done upon each lower lid under the Schleich infiltration anaesthesia without any pain either in the removal of the skin flaps or in the introduction of the necessary sutures.

The healing was by primary union and the result good.

DISCUSSION.

R. W. GILLMAN, DETROIT.

The first case reported by Dr. Campbell is certainly a very rare one. The sequela of a lid trouble, entropion, or turning in of the lid, is most infrequent. In ten or twelve years of practice I do not remember meeting such a case. The danger of an inflammation of this character is to the eyeball itself, and the result is peculiarly serious, as it involves the very delicate structures of the cornea, which are apt to become sloughed or opaque; and, as the doctor remarked—I cannot tell you the exact number—a large percentage of blindness in this world is caused by purulent ophthalmia. It is sad, indeed, to think of how many of these cases could have been prevented by early recognition and prompt treatment. I am sure no one could meet such cases and not become impressed by the want of attention they receive in the early stages. The usual result, as I have said, is some affection of the cornea. A short time ago I enucleated the eyeball of a young child of two years of age, whom I first saw when only four or five days old, suffering from ophthalmia neonatorum; and in that time the cornea had completely sloughed. When I saw the case two years afterwards, the cornea, or rather, the eye, had bulged forward. I enucleated the eyeball, and in its place I inserted a piece of sponge, with excellent results, it forming a nice stump for the artificial eye. What I wish to bring forward and emphasize is the great importance of the early recognition by the general practitioner of ophthalmia neonatorum. By its receiving the proper treatment, as Dr. Campbell says, nearly all these cases of blindness can be prevented.

F. A. ROLLER, GRAND RAPIDS.

This paper of the doctor's brings out a very important subject that we all feel like discussing, and I wish to go back a little further than Dr. Gillman, and say a word in regard to the prevention of this disease in the hands of the general practitioner.

I believe, with a proper disinfection of the vaginal canal, before and during delivery, that many of these cases can be prevented; further, that the general practitioner should, if he has any reason to suspect that the patient has a gonorrheal or any other discharge, use a solution of nitrate of silver, one or two drops, five grains to the ounce, in the infant's eyes. The sequelæ that we usually get from this disease are ulceration of the cornea, followed with leucoma and sometimes staphyloma; I never saw a case of entropion following the disease, but I have seen several cases of ulceration, followed afterwards by leucoma or staphyloma.

I believe the Mules' operation is a very good one, though I have never performed it in a child of the age the doctor mentions.

It seems to me by the introduction of a sphere of some kind the parts are in a better condition to grow and develop, and that the orbit can attain more its natural size; as the child grows those parts will grow more when the orbit is filled in with something that holds those parts in place. I believe the Mules' operation is a very good one, and I think if I find occasion to do the operation in the future I will try the method the doctor has mentioned.

JAS. A. KING, MANISTEE.

In introduction I may say that I think the author of the paper was mistaken in the statement that we have no law requiring the calling of a doctor in a case of midwifery practice where a purulent discharge occurs. I think there is such a law.

In regard to a doctor who does not know an ophthalmia neonatorum when he sees it; if he has studied medicine and graduated, and does not know a disease so easily diagnosed as that, there is no excuse for him. He ought to know it; it is plain enough so that any man ought to recognize it if he never saw a case before. There are some things a man should know when he gets through college, and that is one of them.

If you give your patient a good thorough vaginal douching before labor you may prevent some cases, but unless you keep your irrigation going all the time, I think you would be more likely to fail.

C. L. BARBER, LANSING.

I want to say a word as a general practitioner, as they seemed to be blamed for these cases when they reach the specialist, yet no specialist has told us how to prevent these cases coming to him. I do not believe that the irrigation of

the mother's vagina is going to keep the baby from having sore eyes. There is no doubt but that the sore eyes come from infection of some kind. My method in attending cases of confinement and in preventing cases of this kind is in the care of the baby after it is born. It is all right, if you suspect gonorrhea or any other disease of the vagina, to irrigate it, but I do not think that is sufficient; I think these cases can be prevented ninety-nine times out of a hundred even if you do have infection. My method of preventing it is this: If you have a trained nurse who knows how to wash out the baby's eyes, after it has been given the general bath and dressing, with a sterile solution of salt (normal salt solution), she can do it and do it thoroughly in these cases, and I do not think you will have any trouble with the baby having sore eyes. If you have not an experienced nurse I think it is the physician's duty, before he leaves the little patient, to take a clean cup of sterile water and put in salt enough to make it the strength of a normal salt solution, as you would fix it in a surgical solution; put a little piece of sterile absorbent cotton in the water and wash the baby's eyes out before the nurse, so that you know that not only the inside but the outside of the baby's eyes are washed; then if the nurse who is taking care of the baby afterwards has a thimbleful of sense she will know what to do, and the specialists will never have one of these cases to treat.

DON M. CAMPBELL, DETROIT.

I have very little to say in closing the discussion excepting this, that it is possible to prevent ophthalmia neonatorum from advancing as Dr. Barber has outlined it, and in these cases that become infected, or are likely to become infected in spite of such a cleansing, the infection taking place in the parturient canal, the employment of what is known as the Credé method for the prevention of ophthalmia neonatorum will prevent almost all cases; by that method it has been found in obstetrical institutions that the percentage of ophthalmia neonatorum has been reduced from ten or fifteen per cent. down to one-tenth of one per cent. of all births in those institutions. That method consists of simply dropping two or three drops of a two per cent. nitrate of silver solution into the infant's eyes shortly after birth. In the suspected cases that would be the proper thing for the attending physician to do, not only to take care of the parturient canal, and thoroughly cleanse the eyes, but also to drop into the baby's

eyes two or three drops of a two per cent. solution of nitrate of silver. Just one application is sufficient. The transplantation of a sponge into the orbital cavity after enucleation is a procedure that has been more or less tried; it is open to some objections. It is hard to thoroughly sterilize a sponge. Being an organic substance, it is finally, in the course of time, absorbed, leaving the result much the same as after a simple enucleation.

The feasibility of the Mules' operation in a child as young as this one presents no different problems from a grown person. Instead of removing the whole eyeball, the cornea and contents of the eyeball are removed, as in evisceration, and into the scleral cup an artificial vitreous is introduced. Something is left in the orbital cavity which nature has to nourish, and therefore brings the requisite amount of blood to the part in order to nourish that which is left and to develop the orbit and the side of the face. The age of this infant, I think, perhaps, is a matter of record; I do not remember of reading of one so young, but the result was good; the reaction was not more than after an ordinary enucleation, the cosmetic result is almost perfect, there is no sinking of the parts around the orbit, as is seen so often in artificial eyes introduced in the orbits without an artificial stump of some kind, and the movement is also very good.

As to the kind of material that should be used in Mules' operations, Mules himself, some fourteen or fifteen years ago, first did the operation and used glass spheres; these were very satisfactory, but some of them, I believe, were broken subsequently, so that a metal sphere was introduced; the next one to be used was of silver, and it was during the time when silver was being used that I did this operation on the little baby. If I had to do it again I would use a gold ball, the objection to the silver being that in the course of time it oxidizes and is likely to stain the tissues, whereas gold will not do that.

THE TREATMENT OF TYPHOID FEVER.

GEORGE DUFFIELD,
Detroit.

The subject that I present to you to-day is not a new one by name, it is one we are all well acquainted with; it is one that we will all have to treat before the winter comes, and so I feel justified in presenting

my views on the treatment of typhoid, both dietetic and medicinal, and I hope to give you a brief outline that will prove of benefit to all general practitioners.

About eight years ago a paper on this subject, which I read at Mt. Clemens, created considerable discussion. Then the subject was discussed from the view that the late Dr. Woodbridge advanced, namely, "that intestinal antisepsis was essential in the cure of typhoid fever." My opponents were those who recommended the Brand method of treatment, with cold plunge baths, etc. At that time we each went our separate ways, but it is needless to say that the writer did not adopt the Brand method, because he had found that the intestine could be made almost antiseptic, and cases treated on these lines went on to recovery without suffering relapse or serious complication, as is frequently the case with other methods.

A typhoid fever patient as a matter of course should be kept in bed throughout the whole course of the disease, and the convalescence.

A competent nurse should attend the patient, and the nursing should not be divided among half a dozen of a family. The sick room should be large, well ventilated, and quiet, and as far removed from the kitchen as possible. The nursing should not be done by those of a family who prepare food for the other members, for the ease with which the disease is carried makes it very necessary to avoid all possible chances of spreading.

The patient should be kept cool and the room should be freely and frequently aired. Cleanliness of the patient is to be especially desired. Besides a daily sponge bath, the areas around the anus, the perineal and sacral regions should be thoroughly washed with an antiseptic solution

after a movement. Soiled linen should be removed and treated with antiseptics. The urine as well as the stools should be thoroughly disinfected with 1 to 2000 bi-chloride solution before being thrown into the closet.

The mouth should be frequently cleansed.

Infected food may be a source of continued infection.

The water supply may be infected, and its continued use would act to increase the infection.

The milk supply may be a source of the contagion and the foods formed from it, such as butter, cheese and whey may contain poisons. Fruits that have been exposed to the odors of sewerage are also frequent carriers of typhoid bacilli.

For many years the one symptom above all others that has had all attention has been *the fever*. The high rise of body temperature was looked upon as the most weakening of all pathological changes, and so all efforts were made to reduce the temperature. Many practitioners are still of the opinion that the fever is the one symptom that needs their personal attention, and so all their efforts and all antipyritics are turned to its reduction.

The present treatment of typhoid should be directed toward rendering the effects of the toxins less toxic, and as far as possible innocuous.

This is in a nutshell the plan that I have adopted in the care of my cases.

Osler in his practice says: "Very laudable endeavors have been made in many quarters to introduce methods of treatment directed toward the destruction of the typhoid bacilli or the toxic agents which they produce, but so far without success." Again he says:

"Based on the erroneous view that the bacterial growth is chiefly in the intestine itself, Thistle and others have advocated and attempted elimination by thorough evacuation of the bowels and the giving of intestinal antiseptics."

Our eminent colleague is not in favor of the plan, believing as he does that the intestine is not the primary seat for the development of the typhoid bacilli.

Personally, I believe he is wrong in his theory.

Intestinal antiseptics has been condemned by some of the leading men in our State University, and throughout the United States as impracticable and next to impossible. Many authorities believe that such a treatment has not a rational basis, and so do not advise it. But in the body in health, the intestines are aseptic because of Nature's antiseptic, the bile, and if aseptic conditions exist normally, we have reason to believe that we can restore the condition.

We have not a specific treatment of typhoid fever yet. No method has been discovered whereby the existing cause, the typhoid bacillus and its toxins, may be destroyed, thus preventing its dissemination throughout the whole system.

But in the light of modern research in ætiologic and bacteriologic methods our conceptions regarding the nature and mechanism of the infectious processes are changing; we learn that the fever is an expression of the action of the typhoid toxins upon the tissues.

So our treatment, instituted as early as possible, should be to lessen the intoxication of fast-forming poisons. We must treat a group of symptoms rather than a single symptom, and we must anticipate others. By waiting the temperature rises higher and higher each day, and the in-

toxication may be marked even with temperatures that are comparatively low.

Early symptoms of intoxication are: Severe headache, restlessness, sleeplessness or the reverse, vertigo, and drowsiness, nausea and vomiting, with loss of appetite and a tongue heavily coated in the center, diarrhoea and frequent stools, or constipation. Diarrhoea is a variable symptom, occurring in only about 10 or 15 per cent. of cases. It is more common toward the end of the first week.

Osler reports that on several occasions, where constipation existed and the colon was filled with solid faeces, that extensive infiltration and ulceration of the Peyer's glands of the small intestine existed, as was noted at the autopsy (p. 230, Osler's Practice).

What is this but bacteriological intoxication resulting from absorption of the toxins in the intestinal tube?

Bacteriological infection is to-day beyond question the cause of typhoid fever. The Eberth bacillus is the principal cause, though the proof is not quite as strong as that the tubercle bacillus is the cause of tuberculosis; and typhoid fever never originates except through the action of this germ.

But the bacilli of the intestine must not be overlooked; the bacillus coli communis is capable of producing a fatal degree of toxæmia. This bacillus is the organism most often isolated when bacteriological examinations of drinking water are made, and its presence is undeniable evidence that there is sewage pollution, so that in many cases we have a double infection, the primary one the colon bacilli and the secondary one Eberth bacillus. To these must be added the bacteria that are always present.

For a number of years, when first called to a patient suffering with all the symptoms of typhoid, provided the case has not been more than ten days sick, I give calomel in a few five-grain doses with five grains of Sodii Bicarbonate, depending upon the condition of tongue. This plan is not new. This medicine not only asserts a purgative effect, but shows a marked anti-toxic action upon the intestine, but to get good effects it should be given early. Liebermeister recommends five grains at intervals of two or three or four hours for the first twenty-four hours. This form of medication clears the intestine from fermentative masses, and may be followed with a saline, if not effective.

Believing that the bowels should be kept as aseptic as possible, I have found that pure guaiacol accomplishes this condition better than any other remedy. The dose is usually five minims every three or four hours, given in capsule. I have often noticed a special antipyretic effect when the medicine is given internally. I give it for its antiseptic properties primarily, and I am sure that I accomplish the desired purpose, for the stools and urine are redolent with the characteristic odor, showing that the medicine must have passed the diseased surfaces as guaiacol and rendered the parts aseptic by its presence. Some stomachs are irritated with pure guaiacol and the drug cannot be administered. When such cases are met, recourse may be had to the carbonate, which is no doubt the next best antiseptic. This may be given in doses of from five to ten grains every three or four hours.

Less importance is attached to-day to the direct control of the body temperature than formerly, for the reasons I have mentioned, yet when the temperature persists at 104° or more, as it does at the end of

the first week or ten days, it is necessary to reduce it promptly, and so conserve the strength of the individual and lessen the tendencies to serious complications.

Prolonged high temperature, when it remains above 104° for four or six days, may be attended with serious complications. The quickened pulse and respiration tend to cardiac weakness, or some pneumonic condition, the increased oxidation promotes disintegration of tissues and emaciation, and loss of strength follows rapidly, and the typhoid bacillus are disseminated into distant organs. So to check this prolonged and septicemic condition, cold baths or cold sponging are often employed, but their action is often slow and not lasting, and do not in any way remove the cause of the fever.

For a number of years the local application of pure guaiacol has taken the place of baths with me. My attention was first called to this method of employment when reading the second edition of "Shoemaker's Materia Medica and Therapeutics," page 376, where it says: "Guaiacol is readily absorbed by the skin. It has been found that a local application has the power of reducing febrile temperature." In looking up the subject I found that Scidla of Genova (*Cron. d. clin. med.*, 1892-1893, pages 171-176, *Semaine Medical*, 1893, No. xxi), first pointed out "that pure guaiacol acted as a powerful antipyretic in doses of two to ten grammes when painted on skin of back, limbs and abdomen. In these large doses it was noticed in the urine one-half hour after it had been applied, and the patient tasted the remedy in fifteen minutes. When the pure drug is applied it never produces any inflammatory conditions."

Before the application is made the pa-

tient should be placed between woolen blankets.

The point to be selected for the application is well worthy a moment's thought. I believe the best place is over the ileocecal valve, over the seat of the disease. The part to receive the application is first washed thoroughly with soap and warm water, then with alcohol. The guaiacol is painted over an area of five or six square inches, or better, five to five minims are dropped upon the skin and gently rubbed in by the attendant for ten minutes, and then the place is covered with cotton wadding and oiled silk.

Reaction being in ten or fifteen minutes after the application, the patient breaks out with profuse perspiration, and when the dose has not been large, five to twenty minims, rarely is there marked depression. The temperature continues to descend for three or four hours. The pulse grows full and strong, and it rapidly lessens in proportion to the reduction of the temperature; the patient shows no signs of cyanosis, and invariably says he feels strong.

It must be remembered that the effect of guaiacol is the same as of other coal tar products, only it is more powerful, and great care must be exercised in its use. The fall of temperature is due to an effect upon the heat center in the brain, produced reflexly through the peripheral nerve terminations, and to a slight degree to the inhalation of the vapor of the drug. Profuse sweating follows. Sometimes one-half to one ounce of whisky or a cup of sweetened clear coffee prevents a feeling of weakness and may be given during the application. The reduction of temperature by this method is not attended by marked cardiac weakness. I try to reduce the temperature to 100° or 101° ,

rather than to have it fall to or below normal, for when reduced to normal or below a chill frequently results.

As an antiseptic to the urine, the guaiacol, when administered, must have a beneficial and an antiseptic action, though I have never had a bacteriological test made of the urine.

One thing we as physicians must constantly bear in mind is that the disease is a protracted one. We must anticipate a large amount of loss of weight, and we must therefore study our individual cases and supply to them, as far as it is possible, a nourishing diet, in liquid form, that is easily assimilated and contains fats, carbohydrates, gelatinous substances and proteids. The secret of success is to give small amounts frequently, at intervals of two or three hours.

The diet of typhoid should be that which is easy of digestion by the stomach, without leaving a residue that will act as an irritant and remain unabsorbed in the intestines, and so increase the amount of faeces.

The digestive secretions of the alimentary canal are greatly reduced and perverted, and for this reason it is impossible to secure complete digestion of food, as in health.

Most authorities advise the use of milk as the main article of diet. Theoretically, it appears to be the most rational form of nourishment for fever patients, as it represents the ideal combination of proteid, carbohydrates with fats and salts in convenient solution; the proteids of cows' milk consist of casein, lactalbumin, nucleins and globelins; the casein is four or five times greater in cows' milk than that which the infant gets at its mother's breast; there is six times as much lime salt and three times the amount of acids, and

the acids, together with the milk curdling ferment of the gastric juice, are responsible for the curds that follow the injeſta of milk.

The medical profeſſion naturally aſſumes that milk is a fluid and readily aſſimilated by the ſtomach, leaving little reſidue, but I affirm that milk is only a fluid outside the body. In the ſtomach it becomes coagulated into curds, which are ſolid or ſemi-ſolid. Theſe paſs into the inteſtine to act as a culture medium for the typhoid and inteſtinal bacilli, ſo forming an irritant of a ſerious nature, and later will produce frequent pultaceous ſtools; the ſymptoms of ſuch indigeſtion being a ſenſe of fullneſs or weight in the epigaſtric region, and more or leſs diſtenſion of the bowels with gas. Where tympanitis manifeſts itſelf, when the diſeaſe is in the ſecond week, a time when it is moſt liable to occur, it is a ſerious ſymptom. Often the gaeous diſtenſion is due to a paralysis of the muſcular wall of the inteſtine, brought about by the general infection, the reſult of the abſorption of the toxines; to this cauſe muſt be added the fermentation of food ſtuffs, milk eſpecially acting to increaſe the fermentation proceſſes, and the formation of gas. Frequently, where conſiderable meteoriſm exiſts, perſiſtent diarrhoea accompanies the condition and is proof poſitive in my mind to be due to inteſtinal indigeſtion, produced by the undigeſted milk.

Milk curds from the inteſtines, taken from the ſtools, on poſt-mortem examinations have been demonſtrated to contain ſwarms of bacteria which are productive of fermentation, and continuous auto-intoxication is the reſult. The fever riſes higher and higher as the re-abſorption takes place, and the lymphatic glands and other organs of the body ſuffer from the

infection, and as the diſeaſed germs are abſorbed and appear in the other organs and diſtant glands, we have what might be well called a typhoid ſepticæmia. An excluſive milk diet produces conſtipation, and this condition locks up the bowels, ſo adding a ſerious condition to the already exiſting diſorder. So I ſay regarding milk and milk foods, cut them out.

Sterilization of milk leſſens the tendency of the curd formation, makes them leſs tough, but at the ſame time chemical changes are produced by the boiling which cauſes a loſs of certain neceſſary nutritious elements of the milk, thus leſſening its power for good in the animal economy. The fats are partially decompoſed, favoring butyric acid fermentation. Feeding with ſterilized milk is productive of ſerious and detrimental tiſſue change. In infants rhachitis and ſcurvy follow its uſe. So, in adults, there is a marked loſs of weight when it is uſed and greater emaciation.

Having taken away milk and milk foods, what ſhall we offer as a ſubſtitute for milk diet?

First, let me again emphasize the fact that the diſeſtive ſecretions of the typhoid patient are deficient in quantity and quality, both as to their organic conſtituents and diſeſtive ferments, upon which depend their eſſectiveneneſs.

Bile, the natural antieſeptic of the inteſtines, is withheld, hence that part of the diſeſtion that is carried on in the inteſtine is greatly weakened.

So, keeping one thing in mind, namely, *inteſtinal reſt*, we muſt, ſo far as poſſible, give foods that are diſeſted completely in the ſtomach, and leave little reſidue to be paſſed into the diſeaſed and irritable inteſtine.

First, sterile water, drunk in large quantities, acts as a food and an eliminator, both by the skin and the kidneys, for the typhoid germ is given off in the kidneys in large quantities, like the faeces, and both need diluting. A sub-normal temperature can usually be avoided by judicious feeding.

Beef peptinoids and panopepton, beef juice and beef extracts and strained animal broths, Mellin's and Nestle's Foods, act well as substitutes. Sweetened clear coffee or tea is highly nutritious and often aids in sustaining the patient's strength, even better than alcoholic beverages.

As the fever abates, a carefully selected soft diet promotes an early and speedy convalescence; broths may be thickened with rice or pearl barley; then calf's foot jelly, blanc mange and cream, soft boiled eggs, creamed toast. Sometimes a digestive ferment may aid the more complete digestion of the food and relieve dyspeptic symptoms.

Following this plan of feeding, patients go through their sickness feeling pretty well, are able to turn over in bed and aid themselves throughout. There is practically no constipation—no tympanites, and a fever that is not excessively high, the loss of flesh is not excessive and the tonic-ity of muscle is conserved by this plan of dietic treatment, coupled with the medicinal, above described. Delirium has been almost unknown, and other complications are rare. Relapses have been very infrequent.

Dr. Geo. Dock, of Ann Arbor, on October 14, 1902, read, by invitation, before the Buffalo Academy of Medicine, a paper entitled "Jenner's Works and Their Value in the Modern Study of Small-Pox."

ANEURISM OF THE INNOMINATE ARTERY.

Report of a Case Successfully Operated.

LOUIS J. HIRSCHMAN,
Detroit.

The extreme rarity of the condition, herewith noted, and the more infrequent instances of recovery after operative interference, suggested to me the possibility that the report of a case successfully operated might interest the Society. I say the condition is extremely rare; I might, perhaps, more properly say that while aneurism of the innominate artery is far from being a common form of aneurism, its *recognition* is extremely rare.

I am informed that in Vienna two cases of innominate aneurism were discovered in a series of eight thousand autopsies, and in neither of these cases had the diagnosis been made before death.

Too often patients who complain of pain in or near the region of a joint are told that they are suffering from a slight attack of rheumatism or neuralgia, and careless practitioners prescribe for those conditions when far more serious trouble may be present.

If physicians in general would not take so many of their patients' descriptions of their symptoms for granted and would pay a little more attention to physical examination of the parts complained of, then we would have more early diagnosis of aneurism and fewer fatal cases of so-called rheumatism.

The report of a rare case of any kind is of interest to the practitioner of medicine, not merely because it is a medical or surgical curiosity, but because we know not when just such a case may come up in the practice of any one. The ordinary text-

books are not always as explicit as *they might* be, and little notes from personal experience are often of far more value. So with the idea of possibly being of some help to some one of my brother practitioners, I submit the following report:

The patient, F. W. F., is forty-five years of age, and a railway switchman by occupation. About March 5, 1901, he noticed a soreness over the right side of his chest and his right shoulder. This soreness gradually grew worse and extended to and involved the right arm. He consulted a physician at that time, who made a diagnosis (?) of "rheumatism," and treated him accordingly until August 28, 1901.

His condition steadily growing worse, he decided to change physicians. He accordingly called in Dr. Hiram A. Wright on August 29, 1901. Dr. Wright made a careful examination of the seat of the trouble and made a diagnosis of aneurism of the innominate artery. He asked me to see the case with him the following day. I did so and found upon examination that the doctor had correctly diagnosed a large aneurism of the innominate.

There was a marked bulging of the first three ribs on the right side and of the right side of the sternum. There was also a pronounced pulsatile bulging between the origins of the sterno-mastoid muscles, the right half being most prominent. The integument over the tumor and the adjacent area presented a markedly cyanosed appearance.

The patient at this time was in severe pain a greater share of the time. He was suffering from dyspnoea, insomnia and loss of appetite. His voice was harsh and strident; he was coughing a large part of the time, and was hardly able to walk.

His heart's action was very weak and rapid, intermittent and irregular.

Auscultation revealed a pronounced aneurismal bruit or thrill, which was discernable over not only the pulsating tumor, but also over the course of the right common carotid artery.

The extreme gravity of the situation was explained to the patient and his friends, and the fact that the chance of a successful termination, even if operation was attempted, was very doubtful. He replied that as certain death within a few days stared him in the face, if he were not operated, he was willing to take any chance to gain a longer lease of life.

He entered St. Mary's Hospital on September 3, 1901, and I operated the following morning. Chloroform anaesthesia preceded by the administration of fifteen grains of chloretone (to prevent nausea and vomiting) was employed during the whole operation. An incision five inches long, extending parallel with the clavicle, outward from the sterno-clavicular junction, was made, and the upper part of the aneurism at the root of the common carotid artery was exposed. The aneurism was found to be the size of a hen's egg, only more rounded in shape. I decided to ligate both the common carotid and the sub-clavian arteries at the same time, in the hope that the sac would fill with clotted blood, which would later become organized and the life of the patient thereby prolonged.

The carotid was tied a half inch above the sac, while the sub-clavian was ligated in its outer third. Strong number three, dry-sterilized cat-gut was used. The wound was closed with a buried continuous cat-gut suture, and the integument was approximated with sterilized zinc oxide adhesive strips.

The patient reacted well, there was no swelling of the right arm and no disturbance of cerebral circulation. He made a perfect convalescence, the wound healed by primary intention and he was allowed to sit up at the end of the third week.

At the end of four months he was in better health than for several years, and to-day walks to and from his office (a distance of four and one-half miles). There was at first some atrophy of the right arm, but at end of the fourth month the radial pulse again became established and to-day the arm is as large as ever. At the present time he is engaged in office work, as it was deemed unsafe for him to do any such exhaustive labor as was the case in his previous occupation, railroading.

Of the thirty-six cases which I have found reported operated in this country by the simultaneous ligation of both subclavian and common carotid arteries, but nine recoveries are noted.

In the case personally reported it might be of interest to note that a fluoroscopic examination of the patient five months after operation revealed a solid mass almost opaque to the rays, somewhat smaller than a hen's egg, and occupying a position corresponding to that which was formerly occupied by the aneurism. Dullness can be elicited over the area upon percussion, while inspection fails to reveal any bulging, or in fact anything abnormal, except an almost imperceptible scar.

DISCUSSION.

F. B. TIBBALS, DETROIT.

I am sorry Dr. Hirschman was not able to present the case to you here as he was to the Detroit Medical Society a month or two ago. Dr. Hirschman is entitled to the congratulation of any operating surgeon. These cases are very rare, rarely diagnosed and rarely seen, and there are few men who have the courage to tackle an

aneurism of the innominate artery, and when one is found who has, he ought to be congratulated when his patient recovers.

K. GUNSOLUS, DETROIT.

I cannot help but voice the sentiment of the previous speaker in the doctor undertaking such a formidable operation. In the memoirs of Gross, published in 1868, about the illustrious Valentine Mott, he speaks of him as the greatest surgeon that ever lived, and that he tied more arteries than any other surgeon; and he speaks of the celebrated case of the innominate artery, before that tied by no other surgeon, and with success. It is a formidable undertaking, the ligation of vessels is an interesting one, and it comes to the lot of but few of us, sometimes to only a very few, to do such an operation, but nevertheless we should be prepared, so that when it does come we can ligate any artery that can be safely ligated. The ligation of arteries and the history of the ligature is an interesting one in itself. Celsus, the Roman physician, anticipated the stopping of blood by some other means than the red-hot iron or the red-hot knife 1,500 years before it was acted upon by Parè, and I certainly congratulate this young man—I call him young—for undertaking and successfully carrying out such a formidable operation.

L. J. HIRSCHMAN, DETROIT.

I wish to correct one statement of my friend Gunsolus. He is under the impression that I tied the innominate artery; I didn't; I tied a half an inch above the innominate artery, and I attribute the happy result in my case to the fact that I did not tie the innominate, but that I tied above it, as that artery is too short, and the chances of the ligature slipping are ninety-nine in a hundred, so I don't think he can compare this case with Gross's at all.

THE ADMINISTRATION OF NORMAL SALINE SOLUTION.

ALEXANDER MacKENZIE CAMPBELL,
Grand Rapids.

Normal saline solution or physiological salt solution is a six-tenths of one per cent. solution of chemically pure sodium chloride in water. It is called normal or physiological salt solution, because it contains the same proportion of sodium

chloride as the serum of the human body.

For practical purposes it is prepared by adding a teaspoonful of common salt to a pint of water and filtering and sterilizing the mixture. This, however, is only an approximately correct proportion, as the exact amount per pint of water is 43.728 grains. In hospitals where its use is of frequent occurrence fractional sterilization is employed, and the danger of infection is consequently reduced to a minimum. The fluid should be administered at a temperature of from 110° to 120° Fahrenheit, and this degree of heat should be maintained throughout the operation.

During a short professional career, observations upon and practical experience in, the administration of this solution, both in hospital and in private practice, have impressed me profoundly with its merits, and have constrained me to make this plea for its more earnest consideration and more extended use.

We physicians who live at a distance from great medical centers and who are not within reach of laboratories of research and experiment, only keep step with medical and surgical progress by the application of principles and practices promulgated by our conferees who discover and introduce them. And yet it is largely left with us to pass judgment upon these discoveries and to determine whether they amount to but meteoric hypotheses or important additions to our armamentarium. Normal saline solution has proven to be a valuable auxiliary to the practitioner of medicine and surgery, and its value is by no means fully appreciated or realized.

The injection of fluids into the vessels of the human body to prevent death from hemorrhage is by no means a new measure. Human blood, blood from the lower

animals (plain and defibrinated), alcohol, milk and even mercury has been injected directly into the circulation, and with such unfortunate results that their use is now a matter of little more than history. For more than half a century normal saline solution has been advocated, and its results have been so convincing that the use of all other fluids has practically been abandoned in its favor. There are different methods of administering this preparation, namely: (1) Intra arterial; (2) intra peritoneal; (3) intra venous; (4) rectal, and (5) subcutaneous.

The intra venous, rectal and subcutaneous routes are the ones that have proven to be the most practicable. The procedure in intra venous transfusion consists in disinfecting the surface where the injection is to be made, which is usually into the median basilic vein. Exposure of the vein is made by bandaging the arm above the elbow so as to obstruct superficial venous circulation. Incision over and isolation of the vein, with the application of cat-gut ligatures at either end of the vessel exposed, and ligating the distal end, are the next steps, which are followed by incising the vein and inserting a canula or tube through which is running a hot saline solution. Care must be taken not to admit air into the vein. After transfusion the other ligature is tied and the wound is closed in the usual way. During the operation the finger must be kept constantly on the pulse, and its character must to a great extent decide the amount to be administered. The reservoir should not be over three feet above the patient's head for fear of overpowering the heart, and from one to four pints is the usual quantity employed.

The rectal injection is given in the usual way, and is facilitated by the use of a high

rectal tube, which permits a greater quantity to be taken and retained.

The hypodermic or subcutaneous method seems the most reasonable manner of giving this solution. It consists simply in attaching a needle (such as an aspirating needle) to a fountain syringe filled with the fluid. While the fluid is yet running the needle is inserted hypodermatically into the mammary, interscapular or abdominal region, or the inner sides of the thighs. The tissues with gentle kneading readily absorb the fluid, and I have at one time injected over a pint in this manner. While it matters little which of these three methods is adopted, so long as care is taken, and absolute asepsis is maintained, yet it seems that the subcutaneous injection is the most desirable, because it can be performed quickly and frequently, requires no cutting, causes little pain or disturbance, and can be performed by a trained nurse.

The indications for the use of saline solution are many. It has been most frequently used in emergency practice where either alarming hemorrhage or shock from other causes have rendered the patient alarmingly weak or even moribund; and no one has witnessed its vivifying, animating and immediate effects in such cases without recognizing its value. I have seen it successfully administered on the operating table where death seemed imminent at the very beginning or during the most tedious steps of a major operation; and except for its timely use, where death would have supervened before the completion of the surgeon's work. I have seen its effectual result in shock, the result of contusions to the abdomen, head and other vital parts of the body. Its value from the standpoint of the surgeon seems to be more recognized than

from that of the medical practitioner. And yet it was used extensively during a cholera epidemic in 1832 and 1833, and has since been administered during similar outbreaks. It has been used, and is used to-day, in the various exanthematous diseases, to dilute or cause to be excreted the elaborated toxins. It may have some direct antitoxic effect.

Its use in typhoid fever both to oppose the effects of typho-toxine and hemorrhage was illustrated in my own practice a short time ago. A young man, aged twenty-three, came under my care with a malignant form of typhoid fever. At my first visit I became convinced of the severity of his illness, and ordered his removal to a hospital. The pulse, temperature, and respiration all pointed early in the case to a fatal termination. He became delirious on the eighth day, and on the thirteenth day had the first hemorrhage from the bowels. I concluded to administer normal saline solution with the hope of eliminating and diluting the typho-toxine, and of keeping up blood pressure. I left a standing order with the nurse in charge to inject subcutaneously one pint of normal saline solution at the cessation of each hemorrhage. Within a period of ten days, patient had sixteen hemorrhages and sixteen times did we inject the normal saline solution. Each hemorrhage rendered him almost pulseless, and in addition to his profound degree of intoxication we could offer very little hopes for his recovery. We kept the apparatus and salt solution constantly at his bedside, and lost no time in administering it. With most careful watching our patient made a complete recovery, and is to-day a living monument to the virtues of this expedient.

I believe that in the treatment of severe cases of typhoid fever and other ex-

anthematous diseases, the normal saline solution is an extremely valuable adjuvant, and that the day is not far distant when every practitioner will become familiar with its use, and have at hand the apparatus for its administration. It can be used in the most remote country districts or in the lumber camp, as well as in the most modern hospital or costly residence. It is a remedy that may find an appropriate place in the hands of the surgeon in civil or military life, or with the general practitioner and specialist on any day or at any hour. It can be prepared wherever salt and water and fire are obtainable, and can be administered with a fountain syringe and proper terminals.

In conclusion, let us state that it is not the elixir of life, not an agent that is always successful and incapable of doing any harm, and not a remedy that should be given without careful consideration of the patient's condition. Heart disease, haemophilia, atheroma, apoplexy, chronic diseases of the lungs, kidneys or liver, all contra-indicate its use. Yet so far as observation and experiment go, it does seem to be a powerful stimulant to the heart and to the excretory organs. It is eliminated by the kidneys, skin and lungs, and undoubtedly dilutes and causes to be excreted the poisonous products of disease. It will relieve a patient in collapse more quickly than any other agent I have ever seen used, and it may be repeated frequently with impunity. It can be easily prepared, easily administered, and if judgment is used in the selection of the case, with proper attention to details during administration, it is absolutely devoid of danger. It seems to possess the much hoped for therapeutical trinity of stimulant, anti-toxine and reconstructive, and if every practitioner of medicine and sur-

gery will make use of this simple auxiliary he will be convinced, as I have been convinced, that the administration of normal saline solution is a rational procedure, the reward of which is the prolongation or the saving of many a life.

DISCUSSION.

H. W. YATES, DETROIT.

I think the paper is a very timely one and very happily worded. I wish to call attention to the use of normal saline solution in the treatment of a trouble which the author has not mentioned in his paper, namely, pneumonia, and especially pneumonia of children. I fully believe that the use of saline solution, whether used as a transfusion, as the doctor has mentioned, or rectal enema, is of great efficacy. I have used it in a few cases now, and in two or three of those patients I have noticed marked diminution of temperature when the temperature has been running high for days. Of course, we all recognize that the temperature of children in pneumonia is a variable thing; it runs up one hour and runs down the next, but by constantly watching these patients you can easily tell whether it is alone the fluctuation of the temperature or whether there is not also accompanying it a real change in the condition of the patient, and it is just this that I wish to call attention to, that saline solution in these patients has produced not only a fall in temperature, but the child has assumed a brighter look.

I would like to also mention the necessity for the constant readiness for use of transfusions in obstetrical cases. We never know when we are going to have a hemorrhage; it is impossible to tell; they come on like a thief in the night, and it is impossible for us to get ready after the hemorrhage has taken place, and we should have these transfusion appliances ready in every case.

DELOS L. PARKER, DETROIT.

There is one point in the doctor's paper which, though secondary to the main subject, is yet one of importance. This is in relation to the character of the specific cardiac tonic to be used, when, after the employment of the saline solution, medication to stimulate the heart is indicated. The doctor in his paper speaks of having made use of alcohol for this purpose.

Now, alcohol taken into the system, among other effects, always causes dilatation of the blood vessels, and therefore its use in cases char-

acterized by hemorrhage would tend to increase any bleeding that might be present at the time and also to start anew any other that had been stopped by the presence in the vessels of plugs of coagulated blood.

Caffeine citrate and strychnine sulphate, it seems to me, would represent a class of heart tonics that should take the place of alcohol in this kind of cases.

ALEXANDER M. CAMPBELL, GRAND RAPIDS.

I have been very much gratified with the discussion which this paper has evoked. In regard to the last gentleman, he said that he thinks in those cases that alcohol is not indicated. If I understand the therapeutic effect of alcohol, it produces immediately a constricting effect upon the blood vessels, and the dilatation is a secondary effect. Now in this patient whose case I have related, I used whiskey very freely with him, and I watched for all its ill effects, and it never had any. We used this saline solution in emergencies; each time we used it we seemed to be using it to prevent immediate death. I may be mistaken in my judgment of the effect of alcohol, but if I understand it, it at first produces a constricting effect upon the blood vessels, which is followed by a dilatation of the capillaries.

ANNUAL ADDRESS OF THE RETIRING PRESIDENT OF THE WAYNE COUNTY MEDICAL SOCIETY.*

SAMUEL BELL,
Detroit.

The success of a medical society, other things being equal, may be truly said to be due to the efficiency of its corps of officers, although the unprecedented success of the Wayne County Medical Society during the year just closing cannot be attributed to the above reason. A medical writer, long since numbered with the illustrious dead, said: "*It is not of so much importance where we are as whither we are progressing.*"

Under the advantages of reorganization, every member of the Wayne County

Medical Society is enabled through his membership to become a member of the State and National bodies. With our new conditions come new responsibilities. With so large a membership, including the best talent of the city and perhaps of the state, it will not be difficult to procure papers and to maintain a high standard of excellence; but a question which will appeal to the officers of this Society the coming year will be, how to make the meetings of value and interest to all.

With a mixed membership composed of a few specialists and perhaps eighty to ninety per cent. of men who must earn their bread and butter by practicing general medicine, can we offer them sufficient inducement to attend the meetings, even though it may necessitate leaving the domestic fireside after a hard day's work, or relinquishing the office at the loss of business, or perhaps the discarding of a pleasant social function? It has been the object of the officers during the present year to vary the program, having papers presented by members making a special study of the different departments of medicine and surgery, in order that at some of the meetings each member would find something of especial interest and benefit to him; however, we have only been partially successful.

OFFICE IN A MEDICAL SOCIETY.

In our large and united organization opportunities are presented for the first time in the history of the medical profession in this city for vastly enlarging the influence of the profession and placing it upon a plane where it properly belongs, as a scientific, sociologic body.

My experience as president of this Society has impressed upon me a very important fact to which I wish to call the at-

* Read at the annual meeting, October 2, 1902.

tention of future officers, and which will apply, not only to the one presiding, but to all, and especially to the executive board, viz: that no one should accept office in the Society who is not able and willing to give enough time to properly perform the duties belonging to said office.

This is a truism which applies with greater fitness in our enlarged society.

SOME REASONS GIVEN BY THE PHYSICIAN FOR NON-ATTENDANCE AT MEETINGS.

A few give as a reason that the papers presented are not of sufficient merit to warrant their spending time in attendance and that in such a large society only a few who are gifted or accustomed to public speaking occupy the time, either by invitation or at their own volition.

Then there is the modest physician, who, when asked to take part, pleads inability on account of routine work or want of time. Others have given as a reason that they have evening office hours and have so many patients that they cannot afford to give from two to four evenings a month to meetings. This latter is a very feeble attempt at an excuse. It is well known that the most regular attendants and active participants in our society are those doing the largest business. I could name several who do an immense amount of work, but can nearly always be depended upon for a paper or interesting clinical case or something of value. From a purely commercial standpoint it does not pay to be absent. A medical meeting is rarely held without an interesting paper and discussion, affording to the rank and file of the profession the only post-graduate course which they will have the opportunity of attending. Those who absent themselves are in the end the chief losers,

as the march of progress in medicine is so great that younger and more progressive and better equipped men will be found successful competitors for business.

But it is not in our province to criticize; we wish simply to point out in a kindly spirit some of the weaker points which we as a profession are too liable to drift into, and to prevail upon this large class of successful practitioners to attend our meetings.

Some of the younger and more timid members of the profession give as a reason that they do not feel competent to read and discuss papers and relate clinical cases before so many older and more experienced men. I do not think that there is any young man with the training which our schools give at the present time, who is capable and possesses the confidence necessary to care for a serious case of illness, who should feel any hesitency in expressing himself on any subject or case with which he has knowledge or experience.

The person who takes part in a discussion even to a very limited extent will find that the subject has impressed him much more deeply and that he has derived much more benefit than if he had remained a silent listener. I know of nothing better which helps a doctor to get out of his narrowness of mind and heart than frequent association with the members of his profession. I know of nothing which keeps the medical man more under the influence of the "green-eyed monster" than staying at home and holding himself aloof from the meetings of the medical associations, local, state or national. What is more inspiring and uplifting for a young physician or for one of maturer years, than to attend a meeting of the national association and listen to the eloquent and learned

addresses and discussions of men of national renown?

HOW SHALL WE INCREASE OUR MEMBERSHIP?

With some eight hundred physicians in Wayne county, our united societies with all enrolled will include only about four hundred and fifty members. Unless our roll of membership includes every reputable physician in Wayne county, the object of our organization will not be fully attained. However, unless more aggressive measures to that end are instituted than those in vogue at the present time, I fear there are many desirable physicians who will not join us.

We would suggest the advisability of mapping out the county and putting workers in each district who will act in conjunction with the councilor of the first district. Another help is the issuance of a medical directory, showing the changes and increase of medical population. The New York County Medical Association issues one annually, which has been of great value in completing and sustaining organization.

BENEFITS OF SOCIAL ENVIRONMENT.

The Wayne County Society has ever been a quasi-social organization. I do not see any valid reason why this very desirable feature should not be continued, with perhaps a little more system. Occasionally spending the whole or part of an evening in a social way is not incompatible with the very best scientific work. The methods pursued in the past have not been unsatisfactory. Some societies have adopted the plan of spending in this way the whole or part of an evening every three months. Our treasury for this year will not contain sufficient funds to pursue such a course, if desired, as one dollar a year

per capita will not enable us to do much entertaining after paying extra incidental expenses.

HOW SHALL THE TALENT IN OUR SOCIETY BE UTILIZED TO THE BEST ADVANTAGE?

This is a question which needs more than superficial thought. During the past few years the medical profession of this city has received many valuable accessions, among them young men from the best institutions of this and foreign countries. In order to encourage and give opportunity for original workers, allowing more time for specialization, it has been suggested that sub-societies or sections be formed in such a manner that more effectual work could be prosecuted without detracting interest from the general meetings. Papers could be presented and cases reported in sections, which would necessitate greater detail and amplification; and those which would be of interest to the general meeting could be presented after the members in their respective specialties had had them under consideration.

This subject will require attention in the near future. Another method of arousing the latent energies of our more ambitious younger members and a method adopted by some societies both in the East and West, is the selecting of a subject of general interest by a committee for which competition is asked from members within the society, the successful competitor to be awarded a prize which would be some remuneration for time spent in preparation, together with the honor connected therewith.

While this method of drawing out the talent within ourselves might be considered as an innovation or an experiment in the Wayne County Society, I believe it is not without merit and worthy of careful

consideration. The money necessary could be readily secured.

LIBRARY FACILITIES.

Are our library facilities ample for the proper prosecution of the science and art of our profession?

With the large supply of local talent which our society possesses at the present time, ought we not to expect some original work or investigation?

It is a great treat to have men come from other cities who have done something more than ordinary, and entertain and instruct us for an evening, but we want to encourage and assist our own talent. From my knowledge of the profession in other cities of similar size, the members of our profession will rank quite as high either collectively or individually. Our library facilities are not what the commercial growth and prosperity of the city would warrant. If one wishes to pursue some original line of study, he is compelled to go to the State University, which necessitates time and expense which he can ill afford. In our city of Cleveland the profession own a library building containing 10,000 volumes, 200 journals and employ a librarian.

Our medical library consists of less than 5,000 volumes and 65 journals, a large number of the latter being contributed by local physicians, the location being in our public library. Reports show that it is but poorly patronized, which is either on account of lack of interest or insufficient material. Under our new conditions and with our increase in numbers, it seems an opportune time for action.

We might establish a fund by private subscription. Every physician in Wayne county could give one dollar; many could and would be willing to give much more.

By this method alone a nucleus would be formed which would encourage and attract endowments.

The medical fraternity throughout the state are looking to us, the largest and most powerful organization, as an example. Questions of public policy should receive our attention and our united support when worthy, and our condemnation when conditions warrant.

I wish at this time to speak of one field in which we as a profession can be of benefit to not only this, but future generations. The question of "Forced education in our public schools" comes up once in a while in our societies; but only recently has there been a thorough scientific investigation, showing the effects of school life upon development. I refer to the very exhaustive report made by Dr. W. S. Christopher based upon measurements made under the direction of the child study department of Chicago's public schools, showing the relation of unbalanced physical development to pubertal morbidity.

The age at which most rapid development takes place in both sexes; the difference in the influence of our method of education on the sexes; whether uniformity of studies is what is needed; these are questions of vital importance to every member of the profession as conservator of the health of the community.

There is an exaltation of the processes of life at this period which finds its expression in greater physical strength and increased mental power. It is at this period of life that the neuroses, psychoses, neurasthenias, cardiopathies, deformities and anemias of puberty are the chief morbid manifestations.

Here is a field for study and observation in which the different specialists could labor on common ground. Where statis-

tics are obtainable it is a pretty well established fact that the great army of neurotics and insane is on the increase, also the class which fills our reformatories. Very many of those filling our institutions at the present time manifested evidence of a defective condition during school life.

For the first time in a quarter of a century, or more, we have a united profession. We sincerely trust and hope that the evidence of already existing *entente cordiale* between the different members of the profession, since coming together in our new relations, will continue, and that the spirit of good fellowship will be felt everywhere; it will do much toward uniting the bonds of the profession.

In conclusion, I desire to thank the officers and members, collectively and individually, for their loyal support during a very eventful year in the history of our society.

ABDOMINAL AND PELVIC DRAINAGE RELATIVE TO GYNECOLOGY.

O. H. CLARK,
Kalamazoo.

Common sense teaches us and surgical experience demonstrates that the methods and means of abdominal and pelvic drainage at the present time are either faulty and imperfect in their application or the principles involved as applied to surgery are wrong.

We have, on the one side, eminent abdominal surgeons who to-day honestly believe, teach and practice that in all septic cases drainage in some form or other is indicated and is an absolute necessity for the welfare of the patient. On the other hand there are equally distinguished gynecologists who question the efficacy of drainage in all forms, and by clinical and

scientific experiments and research have demonstrated beyond a doubt (in their own minds), even in septic cases and when pus is found, not only is drainage valueless in a great majority of cases in which it formerly was used, but is in itself dangerous and frequently, if not always, a means of infection.

The conservatives follow the old school and uphold drainage—the liberals, or more advanced surgeons, say “do not drain.”

It is certainly often very perplexing and embarrassing and a source of great anxiety to the young surgeon, at least under the present teaching, which course to pursue in certain cases, and we not infrequently see him turn during the operation and ask his colleagues the question, shall we, or shall we not drain?

Twenty years ago Sims recommended systematic drainage in every ovariectomy, and it was almost the universal practice up to within a decade. To-day where do we stand on this issue?

Perhaps we may get a better understanding of the subject of drainage by a logical process of exclusion and inclusion. Of the former class I can say without fear of contradiction, that in all abdominal and pelvic operations in which infection is not present, this question is settled—drainage is not indicated and should not be employed under any circumstances. I might add to this class also those septic cases in which the diseased parts and infection can be removed by dissection without contaminating the surrounding tissue or organs. For example, appendicitis, septic ovaries, pus-tubes and intraperitoneal abscesses. The latter class, or those cases in which the abdominal or pelvic inflammation has been in progress for a considerable length of time, tumefaction has taken place, is walled off, localized, and cannot be enu-

cleated; and also purulent peritonitis in which suppuration is extensive: open, wash out, drain with gauze either through the vagina or abdominal wall (the former is always preferable when it can be done) would be good surgery and perhaps the consensus of opinion to-day.

On the border line, however, between these two general classes the main question of controversy is whether to drain or not drain, and perhaps the majority of operations are included in this group.

In the removal of a pus-tube, it is ruptured, the peritoneum is infected, or perhaps there is a small perforation in the appendix and pus has leaked into the abdominal cavity, or in the dissection of a pelvic inflammatory mass, it is torn and contents poured into the cavity. What is to be done in this class of cases with reference to drainage? Zweifel has long protested against the use of drainage in all forms, and insists "That it is dangerous and should be relegated to surgical history."

Clark, of Johns Hopkins Hospital, in his admirable paper in the *Journal of Obstetrics and Diseases of Women*, after a careful review of seventeen hundred cases of abdominal sections, with special reference to drainage, says: "By clinical observations the conditions supposed to demand drainage have been gradually reduced from a formidable number to a comparatively small one, and I am certain that this number is still too large; that I am unable in some cases to make it better is true, but in many cases a more minute attention to the smaller details of surgical operations with a greater reliance upon the ability of the peritoneum and general system to eliminate infectious matter, will overcome many difficulties which are now incorrectly supposed to be obviated by drainage."

With reference to the gauze drainage, Drs. Miller and Clark say, "After careful bacteriological examination of sixteen drains it was proven that in not a single instance was the entire piece of gauze free from organisms."

One of the foremost authorities on this question, it will be generally admitted, is Dr. Howard Kelly, of Baltimore. He speaks with knowledge. He tells us: "My clinical work, combined with bacteriological research on the infection of the tube tract convinced me that the glass tube was often powerless to remove fluids from the pelvis and was a source of great danger as a channel of infection of clean wounds. The glass tube was therefore unconditionally abandoned. I still felt the necessity of providing some means of eliminating fluids collecting in the peritoneal cavity and so adopted and used the Mikulicz gauze bag. This proved no more efficient than the simple gauze drain, which was next used and only in infected cases; and no cases were drained simply because of the numerous adhesions, separated and raw surfaces left behind. When pus was found and the microscope showed the entire absence of organisms, the drain was not used. When the gonococcus was found the drain was never used under any circumstances. When the staphylococci and colon bacillus were found in no great numbers the drain was not used. When the staphylococci and colon bacillus were found more abundantly, and the streptococci was found in moderate numbers, a drain was used—but a further study of the gauze drains in the few cases in which I was then using them, led me to the conclusion that they also usually became infected after operation through the opening left in the incision, and that this infection might occasionally give rise to a serious and even fatal result." In conclusion he says, and it is emphasized by italics, "Of my last one hundred cases not one has been drained."

OBJECTIONS TO DRAINAGE.

First.—It defeats the object for which the surgeon intended it, viz: to give a free exit for pus, serum and infectious matter. A small quantity of fluid may be removed during the first few hours, after which the drain acts as a plug and prevents the out-flow.

Second.—It is a foreign body and acts

as an irritant, increasing the exudate and weakening the natural power of the peritoneum to eliminate poisons.

Third.—The drain soon becomes saturated with small blood clots and coagulated serum and becomes a good culture medium for the development of bacteria.

Fourth.—The wound is almost invariably infected sooner or later, producing a suppurating sinus which may persist and discharge for months.

Fifth.—Gauze drain is often very difficult to remove, and hemorrhage may follow.

Sixth.—The abdominal wall is weakened and hernia is one of the sequelae in about eight per cent.

Seventh.—Healing of the wound is greatly retarded, necessitating the process to go on by granulation.

Eighth.—Great pain sometimes follows the removal of the drain and serious accidents may occur, loops of intestine and parts of the omentum may be dragged out of the abdomen.

Ninth.—Fecal fistula may be one of the complications arising from drainage.

Bearing these objections in mind, and considering the facts demonstrated by Kelly, Waterhouse, Clark and others, of the imperfection of drainage, is it not time to call a halt, and carefully consider the prevention and removal of infectious matter without the employment of the drain?

No preliminary preparation requires more care than the proper cleansing of the hands and field of operation. Rubber gloves should be insisted upon in all cases, as no amount of scrubbing and antiseptics can rid the hands, especially the spaces under the finger nails, of all bacteria. The preparation of the patient should be executed by a nurse who has had special training along this line, and should be begun at least twenty-four hours preceding the operation.

Too many assistants always increase the liability of infection. One, perhaps two, is sufficient. Handling the intestines and bruising and injuring the peritoneum lowers the vitality of these tis-

sues and furnishes good ground for the growth of micro-organisms. All raw surfaces should be covered with peritoneum as far as possible. No bleeding wounds should be packed to control hemorrhage. A bit of gauze on the end of a pair of forceps will better remove infectious material (when it has escaped into the abdominal cavity) and blood clots, than saline flushings. The greatest care, however, should be exercised in preventing this accident.

The successful abdominal operator, and the one who will receive the highest reward and achieve the most fame, is not the so-called brilliant and rapid operator—but rather the one who is patient, painstaking, careful in all the technique surrounding the operating table, careful in his dissections, that the cavity may not become infected, and above all heeding the use of the drain.

Kelly says: "Drainage is a confession of imperfect work on the part of the surgeon." I am a firm believer in the truth of this statement, and it has been demonstrated over and over again in abdominal surgery that the peritoneum can and does dispose of large quantities of fluid and infectious matter.

Drainage is still too frequently used, and the supposed benefits derived therefrom are a delusion and it has been proven a snare for the development and propagation of bacteria.

REVISED CONSTITUTION AND BY-LAWS FOR COUNTY SOCIETIES.

That there may be a uniform standard of principles and a uniform method of work, the attention of the members, especially in the counties in which a County Society is not already chartered, is called to the revised Constitution and By-Laws prepared by the Chairman of the Council and the Secretary of the Society, for adoption by the County Societies (page 142).

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DETROIT, NOVEMBER, 1902

OLD MEN IN STATE MEDICAL ORGANIZATIONS.

An organization of the medical profession must include the young, the middle aged and the old. Abundant provision has been made for the first two classes, but little, if any, for the last.

Those interested in professional organ-

ization do well to study the influence of old men. Is it possible to have this influence helpful to the end of their lives? If so, how?

The facts are that non-payment of dues is followed sooner or later by dropping from the roll of membership. If this occurs during the productive period of professional life, none can complain, and such

members—if it is impossible to change their habit in this regard—were better dropped. But when the non-productive period is reached, with no great surplus for actual necessities, the question is different.

We will assume that all old members would be glad to continue their membership; would like to meet their fellows on equal footing, to point with pride to *their* State society, and to discuss its past deeds, its present plans and future prospects with young medical friends. Under the conditions mentioned, their names are stricken from the rolls, and the State society knows them no more, and they know it only as a memory. Some who are not philosophical resent the action as an injustice, as undeserved. Brooding over it in secret, as they are too proud to make their feelings public, they become soured, pessimistic, inclined to make the most of every mistake of the society, and to advertise it unfavorably to their medical friends, and especially to the younger ones. They form foci of infection, and both weaken existing organization and retard the normal growth and development of all.

The remedy is simple, as shown in the organization of the Michigan State Medical Society, viz: to place them on a roll of honor. This is done with such restrictions that the unworthy are excluded and the list made literally a Roll of Honor. All privileges of membership are retained, but no dues exacted. With such conditions there is no reason why all workers in an organization may not remain therein till unable to answer the roll call.

The writer has so frequently observed the evils of past methods in dealing with this class in the profession, that he urges others to study it and to do what they can to effect their removal.

The keynote of real organization is mutual helpfulness, beginning at the so-called top and permeating to the foundation—the individual doctor. There is no question that the extension of this spirit to the class under consideration would receive such a response as greatly to profit state medical organization.

LEARTUS CONNOR.

INTERMITTENT ESSENTIAL FEVER.

Intermittent essential fever is a late syphilitic pyrexia and is not the fever which begins with or shortly after the secondary rash of syphilis has appeared. It may occur many years after the primary stage. For instance, one of Dr. Sidney Phillips' cases had no pyrexia (syphilitic) until ten years after the initial sore.

This late fever of syphilis is of interest for several reasons—first, because it is by no means uncommon; second, because so little is written concerning it; third, because with a correct diagnosis the fever can be controlled and the patient freed from its disagreeable companionship.

The type of fever, as its name would indicate, is usually intermittent, though at times it is remittent. When it is of the former type it has to be diagnosed from tertian or quartan malaria and pulmonary tuberculosis and, when of the latter, from typhoid and other continued fevers.

Differential diagnosis—(a few points).

A. *Intermittent Form.*

Malaria.

1. History:

Whether patient has been living or lives in a malarial region.

2. Blood examination:

(a) Leucopenia.

(b) Malarial parasites in blood.

3. Therapeutic test :
 - (a) No response to mercury or potassium iodide.
 - (b) Quinine or arsenic controls disease.
4. Sputum examination :
No tubercle bacilli.

Pulmonary tuberculosis.

1. History :
 - (a) Family,
 - (b) Personal.
 May help one.
2. Blood examination :
 - (a) Leucocytosis.
 - (b) No malarial parasites in blood.
3. Therapeutic test :
 - (a) No response to mercury or potassium iodide.
 - (b) Quinine or arsenic :
No effect.
4. Sputum examination :
Tubercle bacilli may be found if carefully looked for.

Syphilis.

1. History :
History or signs of other syphilitic lesions.
2. Blood examination :
 - (a) Leucocytosis.
 - (b) No malarial parasites in blood.
3. Therapeutic test :
 - (a) Fever responds to potassium iodide or mercury.
 - (b) Quinine or arsenic :
No effect.
4. Sputum examination :
No tubercle bacilli.

*B. Remittent Form.**Typhoid Fever:*

1. History :
Where patient has been living or lives.

2. Blood examination :
 - (a) Leucopenia (as a rule).
 - (b) Widal reaction
May be positive.
3. Typhoid bacilli :
May be found in stools or in blood.
4. Therapeutic test :
Fever does not respond to potassium iodide or mercury.

Syphilis:

1. History :
History or signs of other syphilitic lesions.
2. Blood examination :
 - (a) Leucocytosis.
 - (b) Widal reaction
Negative.
3. Typhoid bacilli :
Not found.
4. Therapeutic test :
Fever responds to potassium iodide or mercury.

Evidence of syphilitic choroiditis, syphilitic periostitis, syphilitic arthritis, syphilis of the lungs, or gummatous deposits some where can be found at times if careful examination is made.

Treatment.—This is very satisfactory. As a rule the fever falls quickly, sometimes within three to seven days after proper treatment is begun. Whether the iodides control the fever more quickly than does mercury is still a matter of dispute, though the majority of clinicians favor the use of the former.

GUY L. CONNOR,
Detroit.

The Secretaries of the County Societies are requested to send in for publication all matters of interest to their members.

THE COUNTY SOCIETY A UNIT.

That the medical profession has awakened to the necessity of organization is already apparent from the successful work in this state. That more missionary work, however, is needed is felt from the objections raised in some quarters as to the necessity of making every member of the County Society not only eligible to membership in the State Society, but an actual member thereof. Objection is raised that coercion is used, that a physician is forced to join the State Society whether willing or unwilling; and it is claimed that he should have the right of membership in his County Society without being obliged to join the State organization. Were such a hybrid state of affairs permitted, it would destroy the very purpose of organization; we would be no better off than we were before. As soon as a County Society is chartered it becomes a branch of the State Society and it would be impracticable to have members in its branches who were not members of the parent organization. We want the individual member of the profession interested; we hope to show him that the things which affect the profession as a whole affect him individually and that he should interest himself in medical affairs for his own good. Besides, it would be impossible to keep in organization a County Society in which some of the members could vote and others could not vote for delegates to the State Society, and on other matters in which they should have an equal voice. It must appeal to every physician that his work for good must not be limited to his own town, city or county—that he must rise above local conditions and add his strength and influence to the common good. He cannot do this by remaining obscure, unknown

save in his locality, by being a member of a county society only, but he must be an active member of the State Society and by his presence and voice, or by his duly accredited representative, make his wants known and his influence felt. It is only by such union of interests that we can expect to attain the results desired; to be strong as a national organization we must be strong in all parts; the local profession must be well organized and duly represented in the higher societies. By effective organization we hope to attain higher standards of medical education; similar medical laws and requirements and reciprocity among the states, representation in national affairs in which the profession is vitally interested, such as quarantine regulations, etc.

The county society is our unit. Its members must have equal privileges, equal opportunities, equal representation. It cannot be so with its membership divided. Every member is by virtue of his membership not only eligible to membership in the State Society, but is an active member thereof.

THE PRESENT STATUS OF THE BILE QUESTION.

Until recent date it has been accepted by the medical profession and taught by physiologists that the bile was a secretion necessary to digestion, and that for the continuance of good health it must be poured into the duodenum to perform its digestive function. It was also believed that the amount secreted between the periods of taking food was stored up in the gall-bladder, to be expelled at the time that food would be taken again. Recent investigation by Dr. Angus McLean at Harper Hospital, Detroit, first reported in

The Medical Age for February, 1902, has proven that both of these theories are somewhat incorrect. While it has been shown that a portion of the constituents of the bile, "the bile acids," do have some action on the fatty substances in the food, it has also been demonstrated that other constituents of the bile, cholesterin, etc., pass through the intestinal canal without being changed in any particular.

The bile is now looked upon largely as an excretory product, the liver acting as an excretory organ; for, when the bile escapes through a biliary fistula, there is little interference with health. It has also been demonstrated that the biliary flow is continuous, that only a small percentage of the bile secreted between meals can be stored in the gall-bladder, and that the gall-bladder is not a necessary appendage, for health is just as perfect after its removal as before.

These principles are not in accordance with the teachings of the older physiologists, but appear to be well supported by recent investigations on the action of bile as well as with experiments on the biliary flow.

SEE THAT YOU ARE REGISTERED.

THE JOURNAL believes the following paragraph, from the *Journal of the American Medical Association* of October 18, 1902, to be of considerable importance:

"A case recently occurred in this city, says the *Peoria Medical Journal*, which strongly emphasizes the need of physicians attending to the matter of registering their certificates under demands of the law. Dr. H. T. Thomas, who has been practicing medicine here for fourteen years, found it necessary to sue for a claim for professional services; but when the case came to trial he was surprised to find that he had absolutely no standing in court, not having registered his certificate, and was in addition mulcted in a considerable sum assessed as costs."

Communications.

OUR WORK OF ORGANIZATION.

In his annual address at the Port Huron meeting of the Michigan State Medical Society, the retiring president, Dr. Leartus Connor, gave us a lucid résumé of the history of the society from its organization, 1819, to the present time, a period of eighty-three years with but two interruptions, 1851 to 1853 and from 1860 to 1866. It is plain to be seen that its inception originated with a few liberal minded physicians, who were desirous of uniting the interests of medical men into a society for the purpose of self-culture, the broadening of their medical, surgical, moral, social and legal standing, and to impress upon every community of the territory the benefit to be derived from such an organization in the alleviation of human suffering, and in the forming of proper laws relating to public health. Those who heard this excellent address, and those who may read it in full in the journal of the society, can but be impressed with the fact that never during its long and honored history has there been, comparatively speaking, but a very small percentage of the members of the medical profession of the state enrolled as members of the organization. That this society should have prolonged its long and honored existence and maintained its pre-eminent standing is certainly a marvel to the medical profession of the state, and speaks in language plainer than I have the ability to write the mettle of the men who made up its membership.

It is evident that, if these few faithful and self-sacrificing physicians did build up and maintain such exalted ideals to regulate and to guide our professional conduct, that we may expect much if we band together into one harmonious whole the 4,500 physicians of our state. For years our medical societies and journals have been advocating the importance of a thoroughly organized medical profession. But the profession was deaf to the appeal, was apathetic and was not to be aroused even by an appeal to its own interests. But, thanks to the perseverance of such men as McCormack of Kentucky, Simmons of Chicago, Reed of Ohio, Connor of Michigan, and a host of others, whom I might here mention, who were actuated by one common purpose and the genuine belief in the future greatness and exalted dignity which our chosen profession should occupy, the appeal has been heard at last.

In 1901 at the St. Paul meeting of the American Medical Association a new era dawned upon the medical profession of the country. A plan

was devised and immediately adopted whereby the whole medical profession should be organized. This plan first embraced the reorganization of the American Medical Association, then to extend to the whole profession of the United States, embracing every state, and placing each state in harmony with the national body. The state medical societies are to be made up of active county medical societies, which are to be the real life and energy of the medical profession of the state.

Acting upon the recommendation of the American Medical Association, the president of our state society, Dr. Connor, appointed a committee of three members to formulate a new constitution and by-laws to conform to the new plan of organization. After many meetings of this committee the work was finally completed and submitted to the state society last June. The plan carried with it a new organization of the State Medical Society in its entirety. It also provided for the organization of a County Medical Society in each county in the state; provided that these county societies shall be a component part of the state organization, and that every physician must be in good professional standing to hold membership in it and in the American Medical Association.

In this connection I may say that I find quite a belief among the members of the old society that, if they pay the annual dues to the society, they can hold their membership and not necessarily be in affiliation with the county society. The constitution expressly states that the membership in the various county medical societies, reported by the secretary of the same to the secretary of the state organization, shall constitute the membership of the latter.

To the happy surprise of the committee on reorganization its report was unanimously adopted by the society with such additional changes made in the report as in the judgment of the committee seemed essential for the completion of the work of organization of the State Medical Society. An important change was the reduction of the yearly dues from three dollars to two dollars, to be paid to the secretaries of the county societies, and by them to the secretary of the state society, by an assessment per capita. Provision was also made for the transactions of the society to be published in journal form and furnished to each member of the organization without extra cost. The importance of having a representative state medical journal needs no comment. With the active co-operation of the medical profession of our state it will stand as the exponent of advanced medical thought and fulfill a long-felt want to the profession of the state.

To the board of councilors, provided for in the new organization, consisting of 12 members, one for each of the congressional districts, is given in particular the organization and nurture of the county societies. The work they have done up to the present time is certainly gratifying. It is marvelous to contemplate the zeal, enthusiasm and hearty co-operation the profession of the state has manifested in its support of the plan as adopted. It only emphasizes the fact that when this great body of physicians is brought to realize the fact that "to meet the requirements of public sentiment and to stand abreast with advanced medical thought and lofty professional ideals, it must appropriate the spirit of the age and organize, if it expects to make an impression upon organized society; that to stand alone, no matter how meritorious his professional ambitions and work may be, the physician can accomplish but little in the progress of human activity."

The medical profession of our state has been a most potent power for good in every community. But we all well know the exercise of that power has never been brought into operation in behalf of those great problems concerning the best interests of the medical profession and public at large. Its influence has been latent, for the reason that there has been no well organized effort and has been beset by many petty differences of opinion among its membership. Had the 4,500 physicians of our state stood shoulder to shoulder as one in interest at the time the medical bill was before the legislature, they could have wielded an influence which would have forever precluded the possibility of that body ever recognizing that small band of deluded disciples of "Christian Science" and that other product of a simple, ingenious theorist, osteopathy, on an equality before the law and made them respectable.

Why is it that after eighty-three years of faithful labor as physicians among the people, "our influence is so transient, so feeble, that the most absurd fad, the most hair-brained delusion, the most fantastic fraud which comes along, spreads its pernicious poison among our people like that of a prairie fire?" In our addresses and after-dinner speeches we boast of our educational influence over the masses, yet how much weight do our opinions as medical men amount to in public matters, and with what indifference do those who make our laws listen to our protests and suggestions?

The dawn of better things is now, however, upon us, "a new era of medicine." By the action of the last meeting of our State Medical Society

we have "drifted so smoothly into the tide that we have hardly noticed a jar," and when we realize what has happened we at once discover that we have really drifted unconsciously into the current of medical evolution and professional advancement.

To crystalize and perpetuate this most exalted position demands organized effort in every county in the state. This united action of the profession of our state is an absolute necessity at this time. It is left for our decision at once to enter the golden fields of promise and to possess it, or to drift into ignominious failure and remain a passive factor, as we have been so long in the past. The old State Medical Society was the mouthpiece of a little more than 600; the new should be the mouthpiece of more than 2,000 the first year of our organization. To-day the county medical society is the chief center of interest, as through it only can a physician become a member of the state society and of the American Medical Association. The county society must be the sole judge of the eligibility of membership. It is a component part of the state society. Around it must center the strength and professional ability of every physician within its jurisdiction. It must be made strong and representative in every detail.

There is quite a difference of opinion among the physicians of the state regarding the term "eligibility," "sectarian medicine," etc. See Chap. XIII., Sec. 5, of By-Laws, which reads: "Every reputable and legally registered physician who is practicing, or who will agree in writing over his own signature to practice, non-sectarian medicine only, and to sever all connections with sectarian colleges, societies and institutions, shall be entitled to membership."

The code of medical ethics is the mighty superstructure of our reliance and support. Ignorance and superstition have flamed against it, dissensions have dared to break it down, but it still stands the "beacon light" of the grandest profession the world has ever known; a safeguard to you and me. May it stand, as it will stand, as the true guide of our professional conduct until rational medical research can offer something which is better.

My own desire is to see an organization which will draw to its councils every reputable medical man and woman in our state. Men and women who are known *not* because of any so-called "pathy," but for a broad and liberal knowledge of medicine as a true science and an art.

There are many physicians in our state who are deluded and who would sacrifice almost anything

to get out of the rut in which they are struggling. Let us do what we can to help them; let us hold up the "beacon light" of rational medicine; let us impress them with the fact of the utter falsity of a "partial system" of medicine and spread abroad the effulgent rays of the glorious future of the medical profession on this, the dawn of the 20th century.

A. E. BULSON,

President Michigan State Medical Society.

County Society News.

At the afternoon session of the Jackson County Medical Society, held at Jackson, October 14th, 1902, the following papers were presented:

"Typhoid Fever," A. J. Roberts, Jackson; "The Omentum," W. H. Haughey, Battle Creek; "Appendicitis," C. D. Munro, Jackson; "Infantile Ophthalmia—Purulent," J. F. Wesch, Jackson.

The evening session was given up to the consideration of a paper on "The Use and Abuse of Uterine Curetting," by Reuben Peterson, Ann Arbor.

The Houghton County Medical Society met at Houghton, October 6th. The meeting was well attended. The program for the evening was as follows:

1. Report of Case and Presentation of Patient. J. Wendell Clark, Calumet.
2. Empyema. A. I. Lawbaugh, Calumet.
3. The Blood Changes in the Diagnosis of Pernicious Anaemia. Simon Levin, Lake Linden.

The Wayne County Medical Society is in a flourishing condition; nevertheless, the officers are working with enthusiasm to increase its already large membership and to encourage present members into more active participation in its meetings. The Society meets on Thursday evening of each week. During October papers

were presented by H. W. Longyear, David Inglis, L. J. Hirschman, H. E. Saford, C. G. Jennings, and Geo. E. McKean. In order to further the interests of members, it is now proposed to do a certain amount of the Society's work in sections, along the lines followed by the American Medical Association and by many state medical societies. In a society so large as the Wayne County this is much to be desired and will add greatly to the benefits to be derived from membership in the Society. The definite plan of this re-arrangement will be announced later.

Report of Committee on Necrology.

Your Committee on Necrology herewith submits its report on the death of nine members of the society.

Of this number eight died within the year, one having died in 1900, but not heretofore reported.

The last death coming to the notice of the committee was one of its own members, Dr. C. F. Morgan, of Greenville.

The chairman regrets that he has been unable to secure the aid of fellow-members of the committee; and also that it has been so difficult, in some cases impracticable, to get from friends material for biographic and professional memorial sketches, which fact must be accepted as the reason for brevity of some of the notices.

The committee is in doubt as to its right, or discretion, to include in its report mention of members who for many years had been active in support of the society, but by reason of advancing age or illness had been unable to keep up attendance or active relations with the society the past year or two. The committee would suggest that the society express opinion on this point. The renewal of lapsed membership of the living member is now provided for by recent action of the society. Is it not equally appropriate to offer a similar privilege of respect to the memory of the deserving dead?

WM. F. BREAKEY,
For the Committee.

..In Memoriam..

DONALD SINCLAIR CAMPBELL,
1857—1901

ANDREW BLISS CHAPIN,
1839—1902

R. ARTHUR CARMAN,
1866—1900

A. PHILO DRAKE,
1828—1902

CHARLES N. HAYDEN,
1832—1902

C. A. JOHNSON,
1857—1902

CHARLES F. MORGAN,
—1902

HORACE TUPPER,
1830—1902

OSCAR E. YATES,
1845—1901

GEO. F. HUNTER,
—1902

DONALD SINCLAIR CAMPBELL.
1857-1901.

Donald Sinclair Campbell was born February 18th, 1857, in Glengarry County, Ontario, his grandfather, Malcolm Campbell, being one of the pioneers. He was educated at the High School in Alexandria, Ontario, at Woodstock Baptist College and Toronto University, and took his medical degree at the University of Michigan with the class of '77. He then spent a year or more in post-graduate study in Edinburgh and London under Sir Morrell McKenzie; then began general practice in Wilson, Niagara County, New York, and later was elected president of the Niagara County Medical Society. In 1885, after spending six months in post-graduate work in New York, he located in Detroit, where he practiced his specialty of the ear, nose, throat and lungs, until his death, Dec. 17th, 1901, from typhoid fever, after a short illness. In accordance with his wishes, the remains were cremated. Funeral services were under the auspices of Damascus Commandery No. 42, Knights Templar, the bearers, all physicians and personal friends, being chosen jointly from Damascus and Detroit No. 1. He was married in 1880 to Miss Frances Bailey.

of Wilson, N. Y. The doctor was one of the leading practitioners of Michigan in his specialty, and an old member of the State Society, joining in 1886; also of the Detroit Medical Society, the American Medical and American Electro-Therapeutical Associations. He was a genial, whole-souled friend and a practitioner of great ability.

The committee acknowledges the kindness of Dr. F. B. Tibbals in furnishing the foregoing sketch of the life of Dr. Campbell.

ANDREW B. CHAPIN.

1839-1902.

Andrew Bliss Chapin, of Mt. Clemens, Mich., son of Elam and Sarah Lavancha (Davis) Chapin grandson of Jonathan Chapin, was born April 5th, 1839, at Shelby, Mich. After receiving a common school education he attended the academy of Colonel Keeler, Disco, Mich., and commenced the study of medicine in 1858 at Disco with Dr. James N. Cole; attended two full courses of lectures at the department of medicine and surgery of the University of Michigan, from which he was graduated in March, 1861; also attended post-graduate lectures at Bellevue Hospital Medical College and College of Physicians and Surgeons, in the city of New York, 1875 and 1876. He commenced the practice of medicine December 9, 1861, at Flint, Mich.; was appointed September 12, 1862, assistant surgeon, U. S. Volunteers; had charge of St. John's College Hospital, Annapolis, Md., in 1863; went up the James River with General Butler, May, 1864, in charge of a brigade of batteries, and later was transferred to Kautz's division.

Dr. Chapin was professor of materia medica at the Michigan College of Medicine in 1885, and general pathology in 1886. He was a member of the Michigan State Medical Society from 1866, and vice-president in 1874; member of the American Medical Association; member of the school board, Flint, Mich., in 1874; mayor of Mt. Clemens, 1891; county physician in 1890, and member of the pension board of the district about the same time. He had full charge of the small-pox hospital in Chesapeake bay, in 1863. Dr. Chapin wrote an article on the "Treatment of Epilepsy," which was published in the *Detroit Lancet* about the year 1882. He died March 9th, 1902.

The committee is indebted to Dr. W. F. Berry for the above sketch of Dr. Chapin.

R. ARTHUR CARMAN.

1866-1900.

Dr. R. Arthur Carman was born on a farm near Flint, March 27, 1866; was educated in the Flint public schools; graduated from the Mich-

igan College of Medicine, March 23, 1897; taken sick with pneumonia in May, 1900; suffered a relapse, which terminated in tuberculosis, and died July 12, 1900. He commenced the practice of his profession in Saginaw, E. S., in May, 1897. It was said of him by old physicians then: "No young doctor ever made friends with all the other doctors, and worked up so large a practice in so short a time as he."

A. PHILO DRAKE.

1828-1902.

Dr. Drake was born July 31, 1828, near Palmyra, N. Y., and died March 10, 1902. He removed to Washtenaw County, Mich., when a young boy and lived on a farm until sixteen years old. His early determination to study law was abandoned, and he turned his attention to the study of medicine, remaining three years at a medical college in Cleveland, Ohio. He received his degree of M. D. from that institution in 1850, and began the practice of medicine in Wisconsin, but removed to Hastings, Mich., two years later. None knew better than he the arduous labor of a pioneer physician. He trod the self-denying path of duty, undaunted by summer's heat or winter's cold, fearless alike of praise or censure.

During 1855, '56 and '57 he was employed in making government surveys in Nebraska. In 1864 he entered the military service as surgeon of the New Third Mich. Vol., and for many of the last years of his life he was secretary of the pension examining board at Hastings.

Slow to recognize or acknowledge his own ability, he was a profound student of medicine, a close analyzer of disease, and ambitious to keep in touch with the progressive spirit of the age. He was broad in his character and genuine in his sympathy.

For the above tribute we are indebted to the *Hastings Herald*, March 13, 1902. Other portions of the memorial sketch, not especially pertinent to a medical biography, showed that the doctor was held in high esteem as a citizen and enjoyed in large measure the confidence of the community in which he passed the greater part of the ripper years of his life.

Dr. Drake was elected to honorary membership in this society in 1899, and was the only honorary member resident in the state.

CHARLES N. HAYDEN.

1832-1902.

[Abstracted from *Lansing State Republican*.]

Dr. Charles N. Hayden was born at Sodus, N. Y., October 12, 1832, of New England parent-

age. At the age of fourteen he came with his parents to Michigan and received his early education in the schools of this state and graduated from a medical school in Cincinnati before he was twenty-one years old. Later he obtained diplomas from a medical school in Cleveland and from the Rush Medical College, Chicago. (The Medical Register gives Dr. Hayden as a graduate of the Cleveland College of Physicians and Surgeons.) In October, 1854, Dr. Hayden was married to Mrs. Mary Baldwin, in Charlotte, both being residents of Onondaga. Dr. Hayden came to Lansing in 1876 and lived there till his death in April last. He built up a large and active practice. His health had been poor for some years preceding his death. He was a member of the board of examining surgeons for pensions during President Cleveland's administration. He was a member of St. Paul's church and of Jackson Commandery, K. T.

C. A. JOHNSON.

1857-1902.

Dr. C. A. Johnson was born June 2, 1857, in Grand Rapids, Mich., where he passed the earlier part of his life. After completing the work of the city schools, he graduated from the Business College. He was in the grocery business awhile; then he went to study medicine at the University of Michigan, from which he graduated in June, 1889. He went to Grand Rapids, where he was appointed house physician of the U. B. A. Hospital, and after serving in this capacity for one year was appointed surgeon for the G. R. & I. Railroad Co., with location at Mancelona, Mich. He was also surgeon for the Antrim Iron Co.; a member of the district pension examining board; member of the National Association of Railway Surgeons; member of the State Medical Society since 1890; has held the office of health officer of Mancelona; was county poor physician of Antrim county; was director in the Antrim County State Savings Bank; and was engaged in general practice. He was married May 2, 1894, to Miss Margaret J. C. McDonald, of Mancelona. He was a good physician and loved and highly respected by every one who knew him.

CHARLES F. MORGAN.

The committee regrets its inability to learn more concerning the life of Dr. Morgan, than that a Michigan Physicians' Directory, published in 1893, located him then at Greenville, Mich., as a graduate of Yale, 1866, the same year that he was admitted to membership in the society. The

records of the Northern Michigan Asylum show that he was admitted to that institution September 13, 1900, and died April 29, 1902, of general paralysis.

HORACE TUPPER.

1830-1902.

[From *Bay City Tribune*, April 17, 1902.]

Dr. Horace Tupper, a pioneer resident of Bay City, died yesterday at his home, after an illness of over four months, during which time he had been confined to his bed. The doctor had long been a sufferer from cancer, the result of disorders contracted while in the army during the civil war. His family was aware that he could not recover, but his condition did not become critical until a few days ago, a hemorrhage being the cause of death.

Horace Tupper was born October 2, 1830, near Pine Plains, Columbia County, N. Y. He studied with his father, also a physician, until he was twenty-one, and went to Buffalo and entered the office of Dr. Frank Hamilton as a student, and attended the Sisters' General Hospital, remaining there through the term of Prof. Hamilton's charge of the surgical side of the hospital. He then entered the Edward Street Female Hospital in Buffalo, where he combined study and practice for two years. When the war of the rebellion broke out he attached himself to the Fourteenth regulars, and was soon changed to the Second Brigade, Sixth Division, and was assigned to service in the batteries of the Sixth Division, Army of the Tennessee, as surgeon, with the rank of major. He remained with his battery until reaching Corinth, Miss., and saw service at the battles of Pittsburg Landing, Farmington, Corinth and a number of other places. Illness then forced him to retire from the service.

He came to Bay City in 1862 and became interested with Samuel Bolton in the Keystone mill property in West Bay City, building a salt block in connection with the mill. The doctor soon found that he was the only surgeon in the locality, and his services were in great demand at the then village of Bay City and vicinity. In fact, he was the only surgeon in this part of the valley for fifteen years, and until within a very short time of his death was kept busy in professional work. He was a member of the G. A. R. and served as commander of H. P. Merrill post, of this city. He was married at Buffalo, December 24, 1862, to Miss Elizabeth Trinder, daughter of William Trinder, of Chadwington, Oxfordshire, England, who, with their son, survives him. In politics the doctor was always an energetic Re-

publican, but could never be induced to accept any political office.

Dr. Tupper was a charter member of the present organization of the State Medical Society, joining in 1866, and a continuously active member until 1900. He was vice-president in 1883.

OSCAR E. YATES.

1845-1901.

Oscar E. Yates was born in Wayne County, Mich., October 12, 1845, and died at Holland, Mich., October 27, 1901. His youthful days were spent in Calhoun County, where he obtained a practical education in the public schools, and later finished his studies at Mayhew Business College, at Albion, Mich.; after which he taught school, worked on the farm, studying medicine in his leisure hours. He attended the Eclectic Medical Institute, at Cincinnati, Ohio, from which institution he graduated with honors in 1869. Soon after graduation he located at Plainwell, Mich., where he practiced his profession until 1880, when he removed to Overisel, Mich. Three years later he moved to Holland, Mich.

Dr. Yates practiced regular scientific medicine, notwithstanding his graduation from an eclectic school, and lived up to the ethics of the American Medical Association. When his name was presented to the State Medical Society, the Committee on Admissions recommended him unanimously, being convinced that the doctor had discarded all pathies, and he was elected a member without a dissenting vote. No man abhorred quackery in its different forms more than the doctor. He battled for rational medicine, although himself a graduate of an irregular institution, a misfortune to the doctor in many ways; yet it was a credit to his learning and mature judgment that he abandoned the earlier teachings of medical dogmas, and gave his support to scientific medicine. And it was a credit to his professional brethren to recognize and encourage his efforts in this direction and welcome him to the society.

Dr. Yates was in good standing among the medical fraternity in the city of Holland. He was a member of the local society, and became a member of the Michigan State Medical Society in 1896; in the same year he became a member of the American Medical Association. He was local surgeon of the Pere Marquette railroad and a member of the National Railway Surgeons' Association; also a member of the board of pension examining surgeons. He held several public offices; was mayor of the city; member of the school board; and coroner of Ottawa county.

The committee wishes to acknowledge its obligations to Dr. H. Kremmers, of Holland, for the foregoing sketch of Dr. Yates.

GEO. F. HUNTER.

After the presentation of this report, the committee received news of the death of Dr. Geo. F. Hunter, at Sonora, California. He died of pulmonary tuberculosis.

REVISED CONSTITUTION AND BY-LAWS FOR COUNTY SOCIETIES.

Prepared by the Michigan State Medical Society.

CONSTITUTION.

ARTICLE I.—NAME AND TITLE OF THE SOCIETY.

The name and title of this organization shall be the.....County Medical Society.

ARTICLE II.—PURPOSES OF THE SOCIETY.

The purposes of this Society shall be to bring into one organization the physicians of.....county; so that by frequent meetings and full and frank interchange of views they may secure such intelligent unity and harmony in every phase of their labor as will elevate and make effective the opinions of the profession in all scientific, legislative, public health, material and social affairs, to the end that the profession may receive that respect and support within its own ranks and from the community to which its honorable history and great achievements entitle it; and with other county societies to form the Michigan State Medical Society, and through it, with other state associations, to form and maintain the American Medical Association.

ARTICLE III.—ELIGIBILITY.

Every legally registered and reputable physician residing and practicing incounty, who is of good moral and professional standing, and who will agree in writing over his own signature to practice non-sectarian medicine only, and to sever all connections with sectarian colleges, societies and institutions, shall be eligible for membership.

ARTICLE IV.—MEETINGS.

Regular meetings shall be held at such time and place as may be determined by the Society. Special meetings may be called by the President on a written request of five members. Calls for special meetings shall state the object of such

meeting and no business except that stated in the call shall be transacted at such meeting.

ARTICLE V.

The officers of this Society shall consist of a President, Vice-President, Secretary, Treasurer, Delegates, and a Board of three Directors. These officers, except the Board of Directors, shall be elected annually for a term of one year. Delegates shall be elected in accordance with the constitution and by-laws of the Michigan State Medical Society. The Board of Directors shall consist of three members, each to serve for three years. The President, upon his retirement at the annual meeting, shall become the new member of the Board; provided that at the first election after the adoption of this constitution a member of the Board shall be elected for one, one for two, and one for three years. If the President is re-elected to his office, the new member of the Board shall be elected by the Society.

ARTICLE VI.—FUNDS AND EXPENSES.

Funds for meeting the expenses of the Society shall be raised by annual dues, special assessments and voluntary contributions. Funds may be appropriated by vote of the Society for such purposes as will promote its welfare and that of the profession.

ARTICLE VII.—CHARTER.

The Society shall apply to the State Society for a charter at the meeting at which this constitution and by-laws are adopted, or as soon thereafter as practicable, and the charter shall be kept in the custody of the secretary.

ARTICLE VIII.—INCORPORATION.

The Society shall have authority to appoint a Board of Trustees and to provide for articles of incorporation whenever it may deem the same necessary.

ARTICLE IX.—AMENDMENTS.

The Society may amend any article of this constitution by a two-thirds vote of its members at any regular meeting, provided that such amendment shall have been read in open session at a previous regular meeting and shall have been sent by mail to each member ten days in advance of the meeting at which final action is to be taken.

BY-LAWS.

CHAPTER I.—MEMBERSHIP.

SECTION 1.—The Society shall judge of the qualification of its members, but, as it is the only door to the State Medical Society and to the American Medical Association for physicians within its jurisdiction, every reputable and legally qualified physician in county,

as defined in Art. III. of the constitution, shall be entitled to membership.

SEC. 2.—A candidate for membership shall make application to the secretary, and shall state his age, his college and date of graduation, the place in which he has practiced, and the date of registration in this state. The application must be endorsed by two members of this Society. It shall be referred to the Board of Directors, who shall inquire into the standing of the applicant, assure themselves that he or she is duly registered according to the laws of the state, and report at the next regular meeting of this Society. Election shall be by ballot, and two-thirds of the votes of the members present and voting shall be necessary to elect. The application shall be returned to the secretary, who shall file it for future reference. Applications for membership from rejected candidates shall not be received within six months of such rejection. Every applicant, when elected, must sign the constitution and by-laws, agree to support the same and the code of ethics of the American Medical Association, and pay his dues, before he is entitled to the privileges of membership.

SEC. 3.—A physician, accompanying his application with a transfer card from another component county society of this or any other state within 60 days of the issuance of said card, may be admitted without fee on a majority vote of the members present, and without the application being referred to the Board of Directors. Such applications may be acted on at the meeting at which they are presented on the vote of three-fourths of the members present, otherwise they shall lie over until the next regular meeting. No annual dues for the current year shall be charged against such members, provided the same have been paid to the Society from which the applicant comes.

SEC. 4.—A physician residing in an immediately adjoining county may become a member of this Society in like manner and on the same terms as a physician living in this county, on permission of the county society of the county in which the applicant lives, if there be one, or of the state councilor for this jurisdiction.

SEC. 5.—A member in good standing who is free from all indebtedness to this Society, and against whom no charges are pending, wishing to withdraw, shall be granted a transfer card. This card shall state the date the member associated himself with this Society, the date of issuance of the card, and shall be signed by the President and Secretary. It shall be accompanied with a copy of the application presented at the time the member joined the Society, for

information to the Society to which the member desires to attach himself.

SEC. 6.—All members shall be equally privileged to attend all meetings and take part in all proceedings, and shall be eligible to any office or honor within the gift of the Society, so long as they conform to this constitution and by-laws, including the payment of the dues to this Society and to the State Society: Provided, that no member under sentence of expulsion shall take part in any of the proceedings, or be eligible to any office until relieved of such disability. And, provided further, that none of the privileges of membership shall be extended to any person not a member of this Society except on a majority vote of the Society in regular meeting.

SEC. 7.—A member who is guilty of a criminal offense or of gross misconduct, either as a physician or as a citizen, or who violates any of the provisions of this constitution and by-laws, shall be liable to censure, suspension or expulsion. Charges against a member must be made in writing and be delivered to the Secretary, who shall immediately furnish a copy to the accused and to the Chairman of the Board of Directors. The Board of Directors shall investigate the charges on their merits, but no action shall be taken by the Board before giving the accused and accusers ample opportunity to be heard. Nor shall any action be taken by the Board within ten days of the presentation of the charges to the accused. The board shall report (1) that the charges are not sustained; or (2) that the charges are sustained, and that the accused be (a), censured; (b), suspended for a definite time, or (c), expelled. Censure or suspension shall require a two-thirds vote of the members present and voting, and a three-fourths vote of those present and voting shall be required to expel a member. No action shall be taken by the Society in such cases until at least six weeks have elapsed since the filing of the charges. A member suspended for a definite time shall be reinstated at the expiration of the time, without action on his part or on the part of the Society.

SEC. 8.—Kindly efforts in the interest of peace, conciliation or reformation, so far as possible and expedient, shall precede the filing of formal charges affecting the character or standing of a member, and the accused shall have opportunity to be heard in his own defense in all trials and proceedings of this nature.

SEC. 9.—Members expelled from this Society for any cause shall be eligible for membership after one year from date of expulsion and on the same terms and in like manner as original applicants.

CHAPTER II.—POWERS AND DUTIES.

SECTION 1.—This Society shall have general direction of the affairs of the medical profession of the county, and its influence shall be constantly exerted to better the scientific, material and social condition of every physician within its jurisdiction. Systematic efforts shall be made by each member, and by the Society as a whole, to increase the membership until it embraces every reputable physician in the county, as defined in Art. III. of the constitution.

SEC. 2.—A meeting shall be held at p. m. on the in each month (or oftener). members shall constitute a quorum. The officers and committee on program shall profit by experience and by the example of other similar societies, and strive to arrange for the most attractive and successful proceedings for each meeting. Younger members especially shall be encouraged to do post-graduate and original research work, and to give this Society the first results of such labors. Crisp papers and discussions and reports of cases shall be arranged for and encouraged, and tedious and profitless proceedings and discussions shall be avoided as far as practicable.

SEC. 3.—Agreements and schedules of fees shall not be made by this Society, but at least one meeting during each year shall be set apart for a discussion of the business affairs of the profession of the county, with the view of adopting the best methods for the guidance of all. In all proper ways the public shall be taught that business methods and prompt collections are essential to the equipment of the modern physician and surgeon, and that it suffers even more than the profession when this is not recognized.

SEC. 5.—The Society shall endeavor to educate its members to the belief that the physician should be a leader in his community, in character, in learning, in dignified and manly bearing, and in courteous and open treatment of his brother physicians, to the end that the profession may occupy that place in its own and the public estimation to which it is entitled.

CHAPTER III.—OFFICERS.

SECTION 1.—The officers of the Society shall be elected at the (January) meeting in each year, which shall be known as the annual meeting. Nominations shall be made by informal ballot, and all elections shall be by ballot. The vote of a majority of all the members present shall be necessary to an election.

SEC. 2.—The President shall preside at all meetings of the Society, and perform such other duties as custom and parliamentary usage may require.

SEC. 3.—The Vice-President shall assist the President in the performance of his duties, shall preside in his absence, and, on his death, resignation or removal from the county, shall succeed to the presidency.

SEC. 4.—The Secretary shall record the minutes of the meetings and receive and care for all records and papers belonging to the Society, including its charter. He shall keep account of and promptly turn over to the Treasurer all funds of the Society which may come into his hands. He shall make and keep a correct list of the members of this Society in good standing, noting of each his correct name, address, place and date of graduation, and the date of the certificate entitling him to practice medicine; and in a separate list he shall note the same facts in regard to each legally qualified physician in this county not a member of this Society. It shall be his duty to send annually a copy of such lists, on blank forms furnished him for that purpose, to the Councilor of his district by the first day of January. In making such lists he shall endeavor to account for each physician who has moved into or out of the county during the year, stating, when possible, both his present and past address. At the same time, and with his report of such lists of members and physicians, he shall transmit to the State Society his order on the Treasurer for the annual dues of the State Society.

SEC. 5.—The Treasurer shall receive all dues and money belonging to the Society from the hands of the Secretary or members, and shall pay out the same only on the written order of the Secretary.

SEC. 6.—The Delegates shall attend and faithfully represent the members of this Society and the profession of this county in the House of Delegates of the State Society, and shall make a report of the proceedings of that body to this Society at the earliest opportunity.

CHAPTER IV.—COMMITTEES.

SECTION 1.—There shall be a Board of Directors as provided in the constitution, a standing committee on programs and scientific work, a committee on public health and legislation, and such special committees as may from time to time be deemed necessary.

SEC. 2.—*Board of Directors.* The Board of Directors, elected as provided by Article V. of the constitution, and of which the President and Secretary shall be *ex-officio* members, shall be the censors of the Society. It shall consider all questions involving the rights and standing of members and pass upon all applications for mem-

bership. All questions of an ethical nature brought before the Society shall be referred to the Board without debate. It shall hear and decide all questions of discipline affecting the conduct of members, and its decision in all such cases shall be final, except that any member shall have the right of appeal to the Council of the Michigan State Medical Society. It shall make careful inquiry into the condition of the profession of the county and shall have authority to adopt such methods as may be deemed most efficient for building up and increasing the interest in the Society. It shall be the further duty of the Board to hold the official bond of the Treasurer for the faithful execution of his office, annually to audit and to authenticate his accounts, and to provide suitable meeting places for itself and the Society.

In so far as possible all questions other than the discussion of papers shall be referred to the Board, which shall consider the same deliberately and bring its decision before the Society in such shape that the members may act intelligently and promptly.

In case of the absence of a member of the Board, the President may appoint some member to fill the vacancy. The senior member of the Board in point of service shall be the Chairman of the Board.

SEC. 3.—Regular meetings of the Board shall be held at the time of the regular meetings of the Society. Special meetings may be called by the Chairman or by a quorum of the Board.

SEC. 4.—*Committee on Program and Scientific Work.* This committee shall consist of the President, Vice-President and Secretary. It shall be its duty to promote the scientific and social functions of the Society by arranging attractive programs for each meeting and by urging each member to take part in the scientific work. It shall stimulate fraternalism and good feeling among the members in every way possible.

SEC. 5.—*Committee on Public Health and Legislation.* This committee shall consist of three members, who shall be appointed annually by the President. It shall be its duty to enforce and support the sanitary and medical laws of the state in this county, to co-operate with the legislative committee of the State Society in all matters pertaining to legislation, and to prosecute quacks and medical pretenders in this county.

CHAPTER V.—FUNDS AND EXPENSES.

SECTION 1.—The annual dues for each member of this Society shall be..... dollars, to be paid on or before the annual meeting for the election of officers in each year.dollar of such dues shall be

used to defray the expenses of the Society, and two dollars shall be forwarded by the Secretary, with his annual report, to the Secretary of the State Society. Any member who shall fail to pay his dues on or before the date named shall be held as suspended in this Society, and in the State Society, and his name shall be placed on the list of non-affiliated physicians in the report of the Secretary to the Councilor of his district for that year, and shall so remain until such disability is removed.

SEC. 2.—The fiscal year shall be from January to December, inclusive.

CHAPTER VI.—ORDER OF BUSINESS.

The order of business shall be as follows:

1. Call to order by the President.
2. Reading of minutes of last meeting.
3. Clinical cases.
4. Papers and discussions.
5. Unfinished business.
6. Miscellaneous business
7. Announcements.
8. Adjournment.

AT ANNUAL MEETING.

1. Call to order by the President.
2. Reading of minutes of last meeting.
3. Communications.
4. Report of Secretary.
5. Report of Treasurer.
6. Report of Board of Directors.
7. Report of Delegates to State Society.
8. Address of President.
9. Election of officers.
10. Miscellaneous business.
11. Adjournment.

CHAPTER VII.—RULES OF ORDER.

The deliberations of this Society shall be governed by parliamentary usage as contained in Roberts' Rules of Order, unless otherwise determined by vote.

CHAPTER VIII.—CODE OF ETHICS.

The Code of Ethics of the American Medical Association shall be the Code of this Society.

CHAPTER IX.—AMENDMENTS.

These by-laws may be amended at any regular meeting by a two-thirds vote therefor, provided that such amendment has been read in open session at the preceding regular meeting and a copy of the same has been sent to each member by the Secretary ten days in advance of the meeting at which final action is to be taken.

The first meeting of the Committee on Scientific Work and of the Committee on Arrangements will be held in Detroit on Tuesday, December 2nd, to consider ways and means for the next annual meeting to be held in June at Detroit.

Books Received.

Transactions of the Medical Society of the State of New York, 1902.

A Quiz-Compend of Physiology, by A. P. Brubaker, A. M., M. D.

Transactions of the State Medical Society of Wisconsin, 1902.

Medical Directory of New York, New Jersey and Connecticut, 1902.

Transactions of the State Medical Association of Texas, 1902.

Book Review.

General paresis is a disease frequent and important enough to serve as the subject for a most interesting symposium before the New York State Medical Society last year, of increasing frequency and yet too little known, except in the most vague way, by the general practitioner.

General Paresis (the subject of this book) is worthy of more attention than is commonly given it, and this volume ought to be helpful in furthering somewhat a better knowledge of its distinctive features, its etiology, varieties, course, termination, pathology, etc.

The author's asylum experience of twenty-five years is freely drawn upon and many authorities are abundantly quoted.

If we were to criticise any one feature as detracting from the general attractiveness of the book, it would be the somewhat monotonous quotation of lengthy case-histories to illustrate minor points.

We bespeak for the volume that attention at the hands of the general practitioner which it well merits.

The illustrations, some original and some borrowed, are generally good, though some of the wood cuts are poor.

The work of the publisher is generally well done.

General Paresis, Practical and Clinical, by Robert Howland Chase, A. M., M. D., Physician-in-Chief Friends' Asylum for the Insane. Philadelphia: P. Blakiston's Son & Co., 1902; pp. 291; \$1.75.

CHAS. W. HITCHCOCK.

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Original Articles

"SOME TRIUMPHS AND DE- FEATS."*

W. H. HAUGHEY,
Battle Creek.

Conforming to the general law, our triumphs in Gynecology and Obstetrics have been largely achieved by giving strict attention to and making a close study of our defeats. Many workers, resting from their labors, or practically defeated by inability to take the next step, have seen co-workers take up the question, profit by the knowledge already attained, and carry the matter to a triumphal issue.

To preserve the health of our women, with all that condition implies to the human race, to correct impaired functions and, when possible, promptly restore to health abnormal conditions, is the highest aim of the Gynecologist.

To Dr. Marion Simms, laboring among

the slave women in the South, to Sir Jas. Y. Simpson, whose duties brought him in contact with the higher classes in England, to Bennett and Gardener are we indebted for the knowledge that lacerations of the cervix occur during parturition; but to Dr. Thos. Addis Emmet is entirely due the honor of properly describing the pathology of laceration, its causative relation to many other uterine diseases, and the correct surgical means for its permanent relief.

Thus did the labors of these gentlemen, working separately and in different fields, covering a period of more than forty years, secure to the world the great triumph of Trachelorrhaphy.

It is worthy of remark that although the first four and others had recognized the condition and its cause in a tear, they still suffered the defeat of being unable to benefit their patients until Dr. Emmet took the single advanced step of placing the tear together and suturing it there. Bennett had recognized the tear *forty years* before Emmet sewed it up.

*Oration on Obstetrics and Gynecology, at annual meeting, Port Huron, June 26, 1902.

"CURETTAGE AND THE CURETTE."

Of all the simple operations in Gynecology "curettage" supposedly stands at the head, both on account of the ease of its performance and the low, almost nil, mortuary record. Emboldened by these conditions every physician feels competent to perform this *simple* procedure. But is it really a simple and always safe operation? I answer, No.

Of all instruments ever devised for use in mitigating the suffering of mankind, I am convinced the curette is capable of perhaps the greatest mischief. Certain it is that, in unskilled hands, the evil it does far exceeds the good accomplished.

By unskilled hands do not understand me to imply unskilled physicians--far from it. Many physicians of undoubted ability, many obstetricians of undoubted skill, have not had sufficient practice in the manipulation of instruments to imbibe from their use that nicety of touch, that intelligent handling that comes to the successful surgeon only by a long familiarity with the use of instruments, and by that use the knowledge acquired of the force needed for the special structure, tissue or membrane upon which the instrument is working.

GIVEN.—A case of miscarriage at first to third month. Fetus expelled. Membranes retained. If no extraneous means have been employed to produce this miscarriage, or if no examining finger, or douche, or other means have been used by which germs could be introduced to infect the membranes, then the chances are in favor of the condition being an aseptic one. If the curette is now unskillfully used the *doom* of that patient is sealed. Why? For this reason: A sharp douche curette is selected. That surgical *abom-*

ination, SOFT WATER, is boiled and then cooled back with cold water from the cistern pump, or, if allowed to cool by standing, the *hand* is inserted to ascertain the right temperature. The whole is then poured into an *old* water bag and allowed to run through several feet of dirty rubber tubing before reaching the curette, which is held in a trembling hand, unaccustomed to such work. Undue *pressure* is made. Long strips of mucous membrane are scraped from the uterine mucosa. But the placenta, membranes, etc., are not wholly removed. Frequently large pieces are left which, from the germs introduced, soon become septic. Temperature rises, peritoneum is invaded, becomes rough, dull and cloudy. Exfoliation of its endothelial cells takes place. Toxines pass to the circulation beyond, in such quantities as to completely overwhelm the resisting power of the white corpuscles, requiring but from four to six days for death to end the scene.

Is this picture painted too black? Then I have seen it in these somber robes many times. *Oh, that the unskilled in the use of the curette would always select the dull instrument!*

If sepsis is present, then, for the same reason, the dull instrument should be used if we do not wish to add another to the already too long list of premature graves holding the flower of our land—the young mothers and maidens—those who the world have been told died from peritonitis, but who, in so many instances, are lasting monuments to the *unskillful* use of the curette.

ECLAMPSIA.

Our older members have only to recall their college days to bring to mind how little was taught us of puerperal convul-

sions at that time. It is true the clinical picture was faithfully portrayed. It was known that the urine contained albumen which in some mysterious way was supposed to bear causative relation to the convulsions.

What knowledge of eclampsia, and its causation, we have gained since then has come through so many and so widely separated observers that no one person can claim the honor of bringing forward more than one or two points. A very considerable fund of valuable information has by this means, however, been obtained.

When some one called to our attention the supposed fact that in cases of eclampsia the urine not only contained albumen but did not contain its normal supply of urea, it was thought that the cause was found, and for a long time uremia was heralded as such. Later developments, however, revealed many conditions not to be accounted for on the hypothesis of uremia and again the profession was at sea for a cause. With these conditions before us it was believed that although the cause was hidden in obscurity, it would be good treatment to keep up active elimination. By this treatment, no doubt, many were spared, others relieved, and some restored to health after convulsions had occurred.

But the ever restless spirit of research and desire for accurate knowledge, so prevalent in our profession, and so commendable, would not allow us to rest there, and from the length and breadth of the land came many and frequent reports, showing the amount of thought and attention given this subject by medical men.

Especially was thought now centered on that particular form of eclampsia which either develops or continues with

increased force after delivery. To relieve these unfortunates, and save as many as possible, stimulated into action our best endeavor, nourished and ripened our best thought, from the maturity of which has been advanced some of the best ideas of causation, as well as the most practical measures of treatment thus far known to medical science.

It seems to be now quite generally admitted that, in persons susceptible, there is, during pregnancy, stored up in the uterine walls a poisonous principle from the excrementous products of the fetus, which, getting into the maternal circulation in sufficient quantities, produces eclampsia. The theory has it that when labor contractions come on those poisons are forced out of the uterine circulation and injected into the maternal blood; that when sufficient quantities have thus passed through, convulsions supervene.

Undoubtedly, in some cases enough toxins will not be forced through until the final expulsion of the fetus, when with this powerful contraction enough is suddenly injected to completely overwhelm the spasm controlling centers, thus allowing the terrific and so often fatal convulsions which occur at this time—the fatality of which, however, will depend largely on your ability to sufficiently dilute the blood before irreparable damage has taken place.

The object of blood dilution being to decrease the number of poisons in a given quantity, and thereby bring a less virulent fluid into action on the nerve centers, it is obvious that no time is to be lost if we wish to secure for our patient the greatest amount of good.

We have no more direct means at our command than to extract from the veins

from 16 to 20 ounces of the poison laden blood and supply its place with an equal amount of the decinormal salt solution. It will be apparent to all, however, that this maneuver is not always feasible, owing to the surroundings and conditions usually present, when we cannot always be sure that our solution will reach the veins in an absolutely sterile condition. Those same conditions render hazardous subcutaneous and submammary infiltrations.

Fortunately we have at our command a valuable as well as expeditious means which is not open to the above objections. I refer to stomach injection of about one quart of plain water by means of the stomach tube. As water in the stomach is taken up by the natural absorbents and enters the circulation in about thirty minutes, it is obvious that this amount can be repeated every hour until sufficient dilution is obtained and effects are produced.

Diaphoretics, diuretics, and hydrogogues can be administered in unison with stomach injections of water. In case a stomach tube is not at hand a good substitute may be found in the ordinary fountain syringe. Remove the point and after cleansing a portion of the hose introduce it into the stomach and allow the water to run in.

This may not be a perfectly esthetical procedure and may conflict with the fastidious views of some people; *but* when a patient's life is in jeopardy, I never allow the fastidiousness of bystanders to interfere with my efforts to save it.

STERILITY.

Dr. Geo. J. Englemann, of Boston, Mass., who has given this subject much thought and study, in an excellent paper read before the Gynecological section of

the American Medical Association at St. Paul one year ago, gave this definition of sterility: "The condition of the woman who has been married three years without giving birth to a full term child." And then, quoting from the Gynecological record from 1600 to 1650, he shows, from observations therein made on 2,038 married women, a total sterility of two per cent., while at the present time he finds, as near as can well be determined from the number examined and the statistics at hand from Massachusetts, Michigan, and the city of St. Louis, a total of nearly twenty per cent.

Although this percentage varies in the different classes examined, *to the disadvantage of those in the higher walks of life*, yet he gives the causes as largely moral. His paper can be found published in *The Journal of the American Medical Association*, October 5, 1901.

Whether the principal causes of sterility are moral or physical, the fact that it is increasing in our land must be apparent to all who have given the matter the least thought. I could fill this paper with statistics in proof of this statement, but as Dr. Englemann has given abundant statistical evidence in the paper referred to above, I will not repeat them here, but assume that no gynecologist needs such proof; and be the cause what it may, *physical or moral*, to the medical profession in *general* and the *gynecologist in particular* must fall the burden of effecting a cure, if cure is to be had from any source.

Physical defects must be remedied. Diseased conditions must be relieved, and all objectionable features tending to produce physical weakness in our women, whether it be in dress or habits, school

seats or the counting house desks, the anæmia of the maiden or the demands of society, must be sought out and eliminated, that the best type of physical womanhood may be *attained* and *retained*.

Of the means to be employed to secure this much-to-be desired end, some have already been mentioned and others will be. In fact, all gynecologists have been taught how to cure the ills of their patients, and need no suggestions from me at this time. But of the means to be employed to overcome the moral causes of sterility, "Aye, there's the rub." When society ceases to look on fecundity with contumely; when the mothers and elder women cease instructing our daughters "to take care of themselves;" when the sixteen-day story is forgotten, and man and wife live together, "One flesh and one blood," as God who created them intended they should live—then, *and not till then*, will the moral causes of sterility be removed, and ourselves *freed* from the imputation of being a nation of accidents.

Perhaps among the foremost of physical causes of sterility stands double epididymitis, that exceedingly common sequela of chronic gonorrhœa. Forget the sixteen-day story and you have robbed gonorrhœa of one of its most powerful friends.

When the bride of a few months or the mother of perhaps a year comes to you with her husband, or perhaps sends him in her stead, seeking relief from delayed or suspended menstruation, with the old story of inability to support or properly care for more children, then, oh, brother physician, then is your golden opportunity. Improve it. Be kind. Give good advice. Sow good seed, and it will fall mostly on good soil.

It is our duty to correct the moral causes of sterility whenever the opportunity presents itself. This is your opportunity. Use it. Give your prescription. But let it be the kindly advice of a conscientious physician, given with due consideration for the rights of the unborn and innocent being who now depends entirely upon your integrity for the very privilege of existence.

Were I to drop the subject of sterility at this point, I would, I am well aware, have gone over the conventional ground that has been covered many times by the writings of eminent workers who have gone before me. However, even at the risk of adverse criticism, I cannot in conscience bring myself to do so.

Man demands, as a right, for himself privileges and even licenses, the indulgences in which by the weaker sex he condemns and treats with scorn. Society complacently accedes to his demands.

That the conventionalities of polite society certainly require us to pass unheeded, or at most as youthful follies, many indiscretions in the man, which are to be treated with scorn and severest censure when found in the woman, is patent to all. That many young men take advantage of this well-known toleration to engage in practices that not only do violence to their morals, but to their health as well, is beyond dispute. That the resulting condition of impaired sexual health in the young man is a fruitful source or cause of sterility in the young woman who, at this time, becomes his wife, is a *fact*, and a matter of too frequent occurrence to escape the scrutinizing gaze of the conscientious and observing physician.

When society changes its views and *ceases to excuse* in the man what it *con-*

demns in the woman; when it goes farther and declares the propagation of large families fashionable; then, *and not till then*, will the principal incentive for the moral causes of sterility be removed. Will society ever do this? It must. And to you, my brothers, a large portion of the task of bringing about this change must fall.

I stated that society *MUST* do this; why? Because the *perpetuation* of society depends on the *purity* of its *morals*.

Somewhere hidden in the loins of the males now living are the germs, or that from which they will be produced, of those who are to come after and occupy the places we now enjoy. That nobility of character, high aims, lofty aspirations, intelligence and graces, with the capacity to acquire them, are recognized *inheritan-ces* and results of *breeding*, all admit, as the old aphorism, "Like begets like," shows. How much easier then is it for man to transmit his *vices* to his offspring?

When the amorous seed from the immoral loins of a lustful father finds lodgment in the desecrated womb of a reluctant mother, and against the wishes of both continues its growth to term, the conditions are not favorable for bringing forth a being endowed with the high moral attainments mentioned above.

Against too many calamities of this nature society *MUST* protect itself, and we, its teachers, *MUST* point the way.

You may ask why I bring this matter here? *Because I know of no other organization outside of the Church of Rome that possesses the power and courage to handle it.*

As leaders of men; as exponents of truth; as guides of morals; as advisers of youth; as counselors of legislators; as pro-

tectors of the health and intelligence of the human race, *it is our duty to lessen this evil by our instructions, our precepts and our example.*

"THE IMPORTANCE OF EARLY
DIAGNOSIS AND TREATMENT
OF EAR DISEASES IN IN-
FANCY AND CHILD-
HOOD."

A. E. BULSON,
Jackson.

I think I am safe in the statement that in all the category of diseases that affect the human race, there are none of more frequent occurrence, and none which entail such disastrous results in after years on the physical well being of the individual, as the various ear diseases of infancy and childhood.

Compiled statistics show us an infant mortality of twenty to twenty-five per cent. during the first year of child life from acute ear disease.

Deafness, or partial impairment of hearing, is frequently found among school children.

The degree of impairment of hearing in both sexes, in both ears, is about nine per cent., and from thirteen to twenty-five per cent. in one ear. This of course has reference to the period following infancy. If these statistics teach us anything, it is that there is a woeful ignorance, or more properly speaking, carelessness, on the part of those who have these little sufferers directly under their charge. It is a sad story to relate, but nowhere is this unintentional neglect more clearly seen than in the incipient earaches of early infancy and childhood.

Ear pain is a very common story in a household where there are several chil-

dren, and so common that the little sufferers receive little, or in fact no remedial attention, and unless the attack of pain is much more severe than the ordinary, those who have the immediate care of the child do not think it of sufficient importance to ask even ordinary advice, asserting that earache is a family tradition, and will soon get well, or pass off, or be outgrown, etc. There are exceptions to this, but they are rare indeed where, during one of these ear attacks, the child is carefully guarded from cold and exposure.

It is very common to use hot sweet oil, or laudanum and oil, to allay pain, with perhaps hot fomentations to ear. But rational measures of treatment are seldom if ever used, and, I am sorry to relate, which commonplace view of so grave a form of infant disease is too often shared by the family physician.

What I say at this time regarding the ear diseases of infancy and childhood, is for the express purpose of arousing earnest and careful consideration of this most important subject, that the ill effects of this scourge to child-life may be counterbalanced by the adoption, and carrying out, of some rational and scientific method of treatment, the importance of which can not be over-estimated.

I wish to especially emphasize the importance and desirability of establishing in every case which comes to our notice, some rational etiological basis, the importance of which will be more fully realized when we apply the treatment which we will later adopt.

Ear diseases as sequelæ of exanthemata, hypertrophic turbinals, and pharyngeal adenoids, are easily diagnosed, but the unusual cases which appear as idiopathic in character, and insidious in their onset, are

so often shrouded in uncertainty that we are sometimes by force of necessity even justified in shielding ourselves under the too common "*take cold theory*."

I might mention in this connection, that in no case should we be so over-zealous to cure our patient as to allow carelessness to enter into the treatment, and become as a result an etiological factor of the disease.

To attempt to make a proper classification of the diseases of the ear of infancy and childhood would require more space than the time allotted to this paper will allow.

I will suggest, however, for the present occasion, a division as follows, viz:

Idiopathic: Those resulting from sudden taking cold, and inflammatory sequelæ which follow.

Exanthematous: Cases following scarlet fever, small-pox, measles, etc.

Obstructive: By far the most frequent of all in causing acute and chronic inflammation in the ears of children.

Under this head we have pharyngeal adenoids, polypus, hypertrophies of faucial tonsils and turbinals, foreign bodies in nose and tympanic cavity, and lymphoid degeneration.

All traumatic affections of the ear of whatever degree form a class unto themselves, and must be so considered and treated, regardless of the age, constitutional conditions, and peculiarities of the case, the success of which will depend very largely upon proper hygienic care of the patient at home, and the skill of the attending surgeon.

Hinkel, in a valuable paper on this subject, makes the following timely suggestions:

"Earaches, however slight, may sig-

nify disease of a serious nature, involving the internal labarynth.

"*Recurring* earaches, in children, indicate lymphoid involvement.

"*Acute Inflammations* of the ear may be aborted with proper treatment, early applied."

Without doubt pharyngeal adenoids in children are by far the most frequent cause of ear disease, and are also the most amenable to successful treatment.

Medical literature is teeming with verification of this statement, and the very first thing we should determine in a case of ear disease, in a child that comes to our attention, is the presence or absence of adenoids, for without a most definite knowledge on this particular point our treatment will be of little avail.

But few pathological conditions of the body require more careful, tactful, and scrutinizing ability in the physician in making his diagnosis than do the complicated ear diseases of children.

This being the case, it opens up a field for more perfect technique in our operations, and the treatment which may follow.

An important factor which we must not overlook is the constitutional, dietetic, and hygienic conditions of all these cases, the future success of the case depending very largely upon the proper management thereof.

The fact that purulent diseases of the ears of children do now and then recover, with little or no proper remedial treatment, has without doubt led to the very prevalent notion among many physicians that this is no exception to the rule, and hence has been responsible for this seeming neglect in the proper care and treatment in these cases.

Competent and careful pathologists are agreed that in the fetid variety of middle ear suppuration the bacilli are abundant, and also that there is greater danger of mastoid involvement in those cases in which the *streptococci* are found.

If we have demonstrated the existence of such condition by microscopic proof, we should regard the case with just as much solicitation and care as we would were the same infection determined to be present in some more accessible vital organ of the body.

Allen says: "*Streptococcus pyogenes* must be acknowledged to be the most important bacteriological element in the etiology of middle ear disease."

Hereditary and other diatheses must not be overlooked in the ear diseases of children, and while syphilis and tuberculosis are fortunately seldom seen as primary ear infections in childhood, as hereditary factors they may become important in every case that comes to our notice.

It is a matter of common knowledge that more than three-fourths of all cases of ear affections originate in diseases of the throat and nose, and extend to the ear.

Those arising from primary inflammation of the ear are very rare. There are a few cases arising from toxic, or specific blood conditions, as well as a very limited number due to some primary influence on the nervous system.

Whenever ear pain is present, exploration of the nose and throat should invariably be made.

If the condition of these parts were not known before, the examination may shed considerable light on the special structures examined. As an invariable rule we may

expect to find some throat disease present, either obstructive or inflammatory in character.

Enlarged and inflamed tonsils and pharyngeal adenoids are the most common, but oedema, abscesses, ulcerations, elongated uvula, as well as nasal catarrh and polypus, are by no means uncommon. It is of common occurrence to find the throat and ear conditions secondary to a state of malnutrition from indigestion, acid fermentation, etc.

Every physician who has been a close observer of these diseases in children, readily understands that the soft hypertrophic nasal swellings, with profuse discharges, or soft tonsillar enlargement with frequent attacks of ear pains, occurring usually periodically, and augmented by cold in the head, are undoubtedly, and primarily, cases of acid fermentation, and by attention to the diet alone in their onset would get well, if few or indeed no remedial measures directed to the condition of the ears were used.

The question of diet is a most important one, and by strict attention to measures based on a recognition of its importance physicians have of late been able to prevent much suffering among children that might otherwise result most disastrously. A close observer will always recognize the variable habits of child life, and study each one separately and most carefully to observe to what extent his ways invite colds or nervous exhaustion and reflex inflammatory ear disease which invariably follows.

It is often the case the attacks are invited by a general chilling of the body, from improper or insufficient clothing, and in small infants by damp clothing, etc.

The foolish custom so prevalent among the thoughtless and would-be fashionable people of exposing the arms and a good part of the chest of the child to make him appear to best advantage and thus tickle the fancy of a foolish mother and nurse, is to be most rigidly condemned as unreasonable and certainly dangerous.

We should, as far as our counsel goes in regulating the clothing of the child, insist on the child being clad during the winter months entirely in wool.

It lessens the liability to chills and colds and absorbs more of the insensible perspiration that is so marked in children than any other texture of clothing in use.

In this connection we should also see that the clothing at night should be of wool, and of increased weight from that worn during the day.

The importance of this is readily understood from the fact that the motion of the body during the day generates more combustion, and of course more heat.

A rule that we should ever keep in mind is that the child's physical condition is to some extent always affected by every inflammation of the ears.

This is peculiarly true when the primary ear pain commences in the labyrinth of the ear.

One attack seems to beget another until the whole auditory apparatus is involved in a grave inflammatory condition; and if unrelieved early in the onset, either by nature or art, it soon invades surrounding parts, and affects the bony structures, and grave mastoid complications follow, extending through the tympanic plate, causing frequently meningitis, and also into the sinuses, producing phlebitis and ending invariably in death.

Many a child has died from meningitis

and sinus involvement, when the primary disease of the ear as the executing factor had not even been thought of.

Every specialist of any degree of experience in these grave forms of ear disease will bear testimony as to this statement.

I wish to call attention to another point in this connection. In children pus forms so quickly, much more so than in adults, that the surrounding parts become rapidly infiltrated.

It is because of this rapid pus formation that serious results occur so unexpectedly to the average physician, or before a thought or anticipation of a fatal result.

Foreign bodies in the ear and nose are of frequent occurrence among children, and should receive prompt and careful attention. If an insect has entered the ear, a little chloroform applied by means of a small pledget of cotton and forceps directly into the meatus, followed by the use of the syringe, will be all that is required to remove it.

We occasionally meet with some of the most obstinate chronic suppurations of the ear, that have their origin from an injury to the external ear, or from a foreign substance in the post nasal cavity.

I remember when I was a student of Prof. W. H. Mittendorf, of New York, that a young lady came to his office with an offensive suppurative of the ear, and had been a sufferer since nine years of age. She had consulted some of the very best aurists in this country and in Europe, but with no relief whatever. Dr. Mittendorf had the ear thoroughly syringed with a simple antiseptic solution, and then made his examination. After curetting the canal carefully he struck a hard substance, which when removed proved to be a piece

of slate pencil one-half inch long. The young lady remarked: "There is that piece of pencil that was broken off in my ear thirteen years ago." I do not cite this case to show any great skill in its removal, but to show how important it is to make a thorough and careful examination of all cases which come to us with a history of having a foreign substance in the ear.

I might report another case which came to my office for treatment but recently. A boy eleven years of age came with an extensive and offensive suppuration of both ears, that had lasted since seven years of age. He had been under treatment by various physicians, but with no relief. As there was a foul and most offensive discharge from the nose, I cleansed this organ and explored the nasal cavity. Just back of the middle turbinal body I struck a hard substance that was detached and movable; grasping it with forceps I extracted a good sized *hazelnut*, which the mother of the boy said had been there for four years. Every one will readily see that this was the exciting factor of the whole trouble, which proved to be the case from the subsequent treatment which followed, as the boy most fully recovered, both in the offensive disease of the nasal cavity and ears.

I shall but briefly discuss the variable methods of treatment.

Every intelligent practitioner will be governed by the conditions presented in each case, no two of which may require the same treatment. I would mention that we should be guarded against the too prevalent tendency of routine methods, and investigate the symptomatology and general surroundings of the case most thoroughly before we make our diagnosis.

It is most desirable that we commence

our treatment immediately, as soon as there are indications of ear involvement; the earlier the better.

We cannot rely on surgical methods alone to cure all cases, neither can we expect to be successful in all cases by the local applications, no matter how skillfully applied, nor by constitutional treatment of whatever nature it may appear in the case; but we must depend upon the circumstances and conditions surrounding each individual case, and govern our treatment by causative factors involved, and meet them heroically and without fear.

Heat or cold will often give relief from the intense pain, if judiciously applied, but the common tendency to administer some opiate in the early stages of ear disease should be condemned, simply from the fact that opium in any form would obscure the real conditions should serious complications intervene.

If after from twelve to twenty-four hours we get no relief from the intolerable pain, we may be quite certain that more heroic measures will have to be instituted, viz: paracentesis of the tympanum. I want to be distinctly understood that in no case should we wait for any local or general treatment, if upon careful examination at the commencement we find bulging of the drum membrane, but proceed immediately with this operation. The relief which invariably follows is of itself sufficient endorsement to convince the most conservative of its value.

Randall's indications for paracentesis may be summarized as follows:

First. Great pain, with bulging of the membrane.

Second. When the tension of membrane is high, and the bulging even slight.

Third. Insufficient drainage through

the membrane already ruptured, and danger of extension to the antrum.

Fourth. Excessive and continued pain which is not relieved by hot applications.

It is to be admitted that some ear surgeons discountenance this operation. But I fail to find any authentic records in any of the recent medical literature where there has been any serious result following paracentesis of the tympanum, but on the other hand a marked enthusiasm has arisen among physicians for its early use.

It is an operation that certainly requires skill to perform, and the beneficial results which have followed make it one of the grand achievements of modern surgery.

Wherever pus has formed, or sero-sanguinous fluid, as a matter of fact it must find some avenue of escape. If it is in a case of middle ear suppuration, and the eustachian tubes are closed from inflammatory product, it must as a natural result break through the tympanum, or into the mastoid cells, the sinuses or brain, with death of our patient as the inevitable result.

The wet and dry treatment has its advocates, but whichever is used must be so directed as to apply to the general condition of the case.

Much of our success in the treatment of ear diseases in children depends very largely upon the thoroughness with which we examine and treat naso-pharyngeal adenoids, hypertrophied turbinates, and faucial tonsils.

What I have previously stated in regard to the etiology of the case as a causative factor of ear diseases in children, will apply with equal force in our complete and radical removal of the same if we would accomplish the desired result in our treatment of the case.

Our attention must be imperatively directed to this condition as much as to the ear disease itself.

"WHAT IS THE CONSERVATIVE
TREATMENT OF MAS-
TOIDITIS?"

DON M. CAMPBELL,
Detroit.

A careful resume of that part of current otologic literature which deals with mastoiditis has brought home to most of us the realization of the vastly important and rapidly extending significance of this disease.

Perhaps no surgical disease, with the possible exception of appendicitis, has demanded and received so much attention from surgeons as has mastoiditis.

It would seem that in approaching the management of this important surgical infection the profession has divided itself into two principal classes, upon the one hand being those who would attack the disease surgically upon the slightest evidence of mastoid involvement, and upon the other those who depend almost entirely upon milder means and who will not open the mastoid unless absolutely forced by the uncontrollable exigencies of the case into such a procedure.

The former class of surgeons will operate early upon the slightest tenderness over the mastoid antrum or at the mastoid tip; the latter must needs have a complete grouping of the classical symptoms of mastoiditis and an immediate danger of intra-cranial extension of the septic process before the knife, the chisel and the gouge is grudgingly resorted to.

It is needless of course to add that the former class of surgeons hurry their patients into as many dangerous situations

as the latter allow theirs to be overtaken by equally as deplorable conditions.

The conservative treatment of mastoiditis in the writer's opinion is that form of treatment which will most rapidly cure the most cases with the least possible suffering on the part of the afflicted individual; nor is it a truly conservative form of treatment to withhold from the patient the blessings of a surgical procedure which will relieve him of his suffering, drain the abscess and start him on towards recovery.

From a surgical standpoint an important classification of the pathology of mastoiditis is that which makes a distinction between mastoiditis, complicating acute suppurative otitis media, and the same disease, complicating a chronic suppurative otitis media, and right here there is need of some emphasis because it has always seemed to the writer that we must in our management of these cases draw a sharp line of distinction between our conservative management of these two classes of the same disease under vastly different etiologic conditions.

Ten years ago it could have been stated without fear of successful contradiction that a mastoiditis complicating acute suppurative otitis media of sufficient severity to demand surgical intervention was an extremely rare complication.

To-day the situation is quite different, as many instances are now seen where a mastoiditis of a severity and persistency enough to demand quick, prompt, and radical surgical relief is found complicating the acute form of middle ear suppuration.

Is this change due to a new or special form of infection? I think not. In many cases coming under my care careful bacteriologic examinations have been made and have failed in the first place in dis-

covering any special bacterial infection, and in the second place there has not been a uniformity in the germ found, the staphylococcus, the streptococcus, either as pure cultures or as mixed infections, the pneumococcus and the colon bacillus being variously represented.

We must, it would seem, seek for an explanation of the changed conditions in a greatly reduced protective power on the part of the individual who has recently gone through an infection of epidemic gripe. This view holds good not only in ear affections but in any form of infection and almost all gripe epidemics are followed in succeeding months by an increased number of cases of tuberculosis, pneumonia or nephritis.

In discussing the subject we can of course dismiss with a very brief mention the treatment of all cases of mastoiditis in which the presence of pus in the mastoid structures is evidenced by such well marked signs as swelling, redness, and fluctuations in the mastoid region, nothing but surgical intervention being of avail at all in such cases.

The conservative treatment of mastoiditis complicating an acute suppurative otitis media consists in the employment of suitable hot antiseptic irrigation to the auditory canal and tympanic cavity, frequently enough repeated to secure thorough cleansing of the affected parts; the application of the ice bag or Leiter's Coil to the mastoid region for the first thirty-six hours; the application of leeches to the mastoid region and the promotion of bleeding for some hours thereafter.

The disinfection of the canal and tympanum by the introduction of antiseptics and astringent applications.

Proper attention to the nasal, nasopharyngeal and pharyngeal cavities.

A free incision through the membrane tympanic carried well up and out into the upper and posterior canal wall in all cases in which drainage is not very free.

These means, together with proper attention to the general condition of the patient, constitute the first division of the conservative treatment of mastoiditis in cases complicating acute suppurative otitis media, and I must insist that they should be given a thorough and fair trial before the mastoid is opened; nevertheless in my conception of the situation the truly conservative treatment of these cases does not end here, but includes the opening of the mastoid in cases which do not yield to this form of treatment.

How long shall this form of treatment be continued before resort is had to opening the mastoid?

It is entirely futile to attempt to answer this question in hours, days, or weeks, but as long as the patient is making progress towards recovery it can be deferred.

The pulse, the temperature, the general condition of the patient, the subsidence or advancement of the local signs of involvement of the mastoid and adjacent structures, must answer this question in each individual case.

In a general way it may be said that unless there is some sign of improvement, either in the general condition of the patient or in the local manifestation of the disease in four or five days to a week, the conservative management of the case would demand that the mastoid be opened and thoroughly evacuated of all septic material.

There is one class of cases which are a

source of great worry to the surgeon, viz: those in which for several days there is apparently no progress either way or in which periods of apparent improvement are followed by relapse without adequate cause.

In such cases of doubt as to whether or not the case is making satisfactory progress, the mastoid should be opened promptly and as an explanatory procedure in order to clear up any doubt as to the conditions existing at that point and as a purely conservative measure.

Quite different, however, is the situation when we have to deal with a mastoiditis complicating a *chronic* suppurative otitis media.

In such a condition while the present attack may subside under treatment, the improvement will be only temporary, and as in the case of relapsing appendicitis the disease will ultimately terminate the life of the patient; so in such a condition the only conservative procedure is an immediate, complete and radical operation for the removal of not only the contents of the mastoid but also all diseased tissue in whatever locality it may be found.

The conditions, the pathology, the subsequent behavior of these two classes of mastoiditis are so different, that what is good, sound, reliable, conservative treatment in one is not in the other permissible at all upon the same ground.

In the writer's opinion the conservative treatment of mastoiditis, looking at the question in the broader sense of the conservation of the best interests of the patient, must include as an important part of the management of the cases of mastoiditis complicating acute suppurative otitis media, the surgical opening of the mastoid as soon as the more conservative proce-

dures, as outlined above, fails to produce a satisfactory progress of the case towards recovery, or where there is a reasonable doubt as to the favorable progress of the case.

The conservative treatment of mastoiditis complicating a *chronic* suppurative otitis media must exclude all methods of treatment more conservative than the early and complete removal by surgical means of all necrotic, necrosed or diseased tissue, and must include thorough surgical drainage during the healing process.

SOME REMARKS ON THE TREATMENT OF MASTOID DISEASES.

ROBERT WINTHROP GILLMAN,
Detroit.

My chief object in writing this paper is to advance a plea for more conservatism on the part of aural surgeons in dealing with cases of inflammation of the mastoid process. At present it seems to be, with many surgeons, the fashion to operate on nearly all the diseased mastoids that come before them. Those who, a few years ago, would preach the efficacy of extensive incisions of the drum-head, establishing free drainage, together with other correspondent treatment in cases of mastoiditis associated with purulent inflammation of the middle ear, claiming that with this treatment but few cases would demand the major operations, now calmly take chisel and mallet in hand and proceed to obliterate the whole mastoid process, claiming that, if properly performed, the operation itself is without absolute danger to the patient, and if done early grave complications can be averted.

Are we always sure that even the simple operation of opening the mastoid cells is without danger to our patient?

By way of answer to this question I might state that a distinguished eastern aurist recently remarked to me that he had, time and time again, witnessed some of the worst cases of sinus-thrombosis, brain-abscess, deep abscess in the neck, etc., follow the simple operation; and he believed that in a number of these cases the operation itself was the cause of the complications.

In the fall of 1898 I visited several prominent New York aural surgeons for the purpose of seeing them at work on mastoid surgery, and to ascertain just the class of cases they selected for operation. I soon discovered one reason, at least, why I was not more frequently performing operations on the mastoid as compared with the number of cases reported by some surgeons, namely, that many diseased mastoids are opened unnecessarily early, and that not enough delay as regards operative interference is countenanced by the enthusiastic aural surgeon of to-day.

I fully realize that too great temporizing favors brain-abscess, sinus-thrombosis, meningitis and septicemia; that there are undoubtedly many cases which require early operation; that even the life of the patient may be threatened by receiving anything less than prompt treatment, with free opening of the mastoid process, and possibly more than this may be demanded. But have we not all seen cases of mastoiditis presenting the chief classical indications for opening the mastoid process, recover promptly on a free incision of the drum-head or of the bulging auditory canal, with other appropriate treatment? In this connection the report of the fol-

lowing case may serve as an illustration:

On the afternoon of June 4th, 1902, Dr. M. W. O'Connor, of West Detroit, referred to me John Kelly, aged six years, for relief of a marked right mastoiditis of a few days' standing, following an attack of acute otitis media purulenta. On examination I found the area over the whole mastoid swollen red and very sensitive to the slightest pressure, especially over the antrum. The ear was standing out almost at right angles to the head. The posterior and superior walls of the external auditory canal were bulging and red. The canal itself contained a slight amount of thick stringy foetid pus, though there was no discharge from the external meatus. On removing this secretion the drum-head was seen to be red, slightly bulging, and contained a pin-point sized perforation in the center of its upper half. Temperature $101\frac{1}{2}$, pulse 110. Patient presented a pale, sallow appearance. I at once made an incision through the membrana tympani along its posterior and inferior attachments, and cutting into the inner wall of the tympanum. This was followed by free hemorrhage, but no pus. Free irrigation of hot carbolized water from a fountain syringe was ordered, and to be repeated every two hours while the patient was awake.

The following morning a profuse discharge of foul-smelling pus flowed from the large opening in the drum-head and the mastoid symptoms were much lessened in severity. His temperature had fallen to $99\frac{1}{2}$. In four days the patient was practically free of his mastoiditis. The discharge continued from the external meatus for ten days, when it yielded to treatment, and at the end of two weeks the little fellow had entirely recovered his health.

I believe there are many aural surgeons who would have found in this case one which required, in their opinion, prompt opening of the mastoid process without attempting its cure through any other channel.

I could report many like cases that have occurred in my practice during the past ten years, but the above one, together with the brief history of the following case, will, I think, make plain my position:

In March, 1901, Mrs. S., aged thirty-eight, had been ailing for three weeks from "earache" and discharge from the left ear, when her family physician, Dr. F. W. Mann, requested me to take charge of her case. I found the region over the whole mastoid extremely sensitive to pressure, but not discolored or swollen. The posterior and superior walls of the auditory canal were tumefied and red, and the drum-head, which contained a good sized perforation in its lower half, was bulging. There was a very free discharge of thick, odorless pus from the meatus. The patient's temperature was $102\frac{3}{5}$. Her color was decidedly sallow and she presented the appearance of pus absorption, which we so often see in cases of mastoiditis.

I made a large V-shaped incision along the inferior and posterior attachment of the membrana tympani to insure freer drainage, and ordered douching of the canal with three pints of hot carbolized water, every hour. The condition of the patient was not improved the next day, and she complained of more pain back of and above the mastoid. A deep incision into the bulging tissue and bone of the posterior wall of the auditory canal was now made, and the irrigation ordered to be continued every hour, as before. There

was a decided change for the better in the condition of the patient the next day, the temperature falling to $100\frac{3}{5}$ and the pain almost disappearing from the mastoid. The region over the antrum was still very sensitive to pressure, but the case gradually improved, and all signs of the mastoiditis disappeared in about eight days.

The late Dr. Edwin W. Pyle, in a paper read last fall before the New York Academy of Medicine, related the history of a case of acute mastoiditis following scarlet fever, which presented pronounced indications for operation, but the patient refused to undergo any operation, and under the influence of hot douching made an excellent recovery. He gave statistics from twenty-four physicians in general practice throughout the country, which were verified by his personal experience of twenty-five years in general practice and four years in special work, to show how seldom mastoiditis needs operation.

Though in these remarks I may seem to have advocated conservatism unduly in dealing with mastoiditis, it must not be taken for granted that I do not appreciate thoroughly the necessity of promptness where judgment and experience indicate the required condition for immediate operation. If called upon for a statement of these conditions, I would give in outline the following suggestions: Immediate opening of the mastoid process is indicated: I. When an acute inflammation of the bone associated with purulent inflammation of the middle ear does not yield promptly to incision of the drum-head or bulging auditory canal and other palliative treatment. II. When severe pain in the mastoid with or without pain in the same

side of head continues, resisting all other treatment. III. When the symptoms point to sinus involvement, meningitis, brain-abscess or septicemia. But, besides, there is, of course, the personal element involved in the judgment and experience of the operator, which cannot well be weighed or measured and each case has its peculiarities which must be considered separately.

In illustration, I give, in closing, a brief abstract of an interesting and instructive case, as it shows that the interior of the whole mastoid process can sometimes become broken down in barely two weeks, when attacked by acute inflammation, thus developing a condition which would terminate fatally if not interfered with promptly: On May 14, 1902, I first saw Mrs. B., of Brighton, Michigan, who gave the following statement: After suffering from a severe head-cold, two weeks previously, she was seized with a severe ear-ache, which lasted a day, when the ear began to discharge, on which the pain moderated; but she continued to suffer some distress in and back of the ear, up to the date mentioned. Her family physician had treated her during the first week of her ear trouble, but then, discovering the tissues over the mastoid swollen, red and painful, he advised her at once to consult a specialist, and she came to Detroit and placed herself under my care, in St. Mary's Hospital. I found her to be suffering from acute otitis media purulenta with pronounced mastoid involvement. Her temperature was 100°. Pulse 92°. The region over and posterior to the mastoid process was swollen, and very sensitive to pressure. The posterior and superior walls of the external auditory canal as well as the drum-head were bulging.

A bacteriological examination of the pus was requested, but for some reason this was not made.

An incision of the membrana tympani was followed by free hemorrhage and pus. Douching of the ear with hot carbolized solution was practiced every two hours. The next day, May 15th, she appeared to be in much better condition as regards the mastoiditis; but on May 16th a large swelling in the neck below the tip of the mastoid (Bezold's symptom) determined me to at once open the mastoid cells. Her temperature at this time was only 99½. Under chloroform anesthesia, and with the assistance of the house-staff of the hospital, I performed the Schwartze operation. No fistulous opening in the bone could be discovered. On removing a thick plate of bone over the antrum, I was surprised to find the whole mastoid process reduced to one pus cavity filled with broken down cellular tissue and some granulations. A probe could be directed readily into the antrum. The external bone-opening was enlarged down to the tip of the mastoid, and carefully curetted of its broken-down tissue. The lateral sinus was exposed, very free venous bleeding taking place. The cavity was firmly packed with bichloride gauze. The patient rallied nicely from the operation, which consumed twenty-five minutes. Four hours after she developed a fainting spell, and being pulseless at the wrist, a pint of hot saline solution with half an ounce of whiskey was injected into the tissues of the breast. She improved rapidly, and, not a bad symptom developing, left the hospital in three weeks.

The first meeting of Committee on Scientific Work was held at Detroit, Dec. 2d.

THE ADVISABILITY OF EARLY SURGICAL INTERFERENCE IN ACUTE TYMPANO-MAS- TOIDITIS.

EMIL AMBERG,
Detroit.

Since Schwartze, of Halle, reintroduced the mastoid operation and placed it on a scientific foundation, a change has taken place in the views of the medical world in general in regard to surgical interference in affections of the middle ear and adjacent parts. If we consider that about twenty years elapsed from the time that the tubercle bacillus was discovered until the necessity of rational preventive measures became familiar to the profession and the public, we little wonder that it has required about three decades before firm rules have found their enforcement in otology, which only recently is gaining the recognition due to its importance. Surgical interference in affections of the middle ear is becoming recognized only after the unceasing efforts of those whose better insight place the duty upon them to show that the use of the knife is not only justified but imperative under certain conditions.

How does it happen that a more rational therapy for ear affections of the acute type has only recently been more generally accepted?

We should consider the following:

1. Tympano-mastoiditis is sometimes not diagnosed.
2. Only lately has it been recognized that complications of a middle ear suppuration are very frequently preventable if the mastoid operation is performed soon enough. These complications can mostly be headed off by dealing surgi-

cally, at an early date, with ear suppurations by removing the focus of infection.

3. Brain abscesses and other complications of middle ear suppuration give a doubtful prognosis, even if surgically interfered with.

4. The mastoid operation itself is, in the very great majority of cases, free of any danger, if performed by trained hands.

5. An early operation in cases which may, perhaps, get well without operation hastens recovery.

6. Exploratory operation is not only justified but sometimes imperative.

Time and occasion prevent me from entering upon a lengthy discussion of all points. Let us only consider at random some views corroborating my statements.

1. It is very probable that tympano-mastoiditis is a much more frequent affection than is generally supposed.

Dr. Hammond, of Boston, says: (I) "Many times I have had the statement made to me by physicians that they have been in practice twenty years, we will say, and have never seen a case of mastoiditis, and almost in the next breath ask: 'What are the symptoms?'"

2. That suppurations in the tympano-mastoideal cavity, if left alone, frequently lead to fatal complications, is well known.

Koerner says: (II) "Pitt found in nine thousand autopsies in Guy's Hospital, 1869-1888, 57 deaths by ear suppuration (1:158); Gruber, Wiener Allgemeines Krankenhaus, 1873-1894, in 40,073 post mortems, 232 (1:173); Poulson, in 14,580 post-mortems, Copenhagen, 1870-1895, 48 by ear suppuration (1:303). Of ear patients 0.3% die, according to Buerkner and Randall.

Koerner compiled the results of 115 autopsies and found that:

41 patients died of sinus phlebitis and thrombosis,

43 patients died of brain abscess,

31 patients died of meningitis.

Dr. E. Oliver Belt (III) says: "In this country 4,000 deaths which occur annually from abscesses of the brain are attributed principally to suppuration of the middle ear."

Others say that one-third of all brain abscesses are caused by middle ear suppuration.

3. That it is more difficult to deal with complications arising from tympanomastoiditis is apparent. Sinus phlebitis and thrombosis, brain abscesses and meningitis, do not permit us to give an entirely favorable prognosis even if surgical interference is resorted to.

Dr. Brindel, of Bordeaux (IV), in an excellent article, speaks of a case in which the presence of brain complications was apparent six days after the ear affection started. He further says that in some of the patients meningeal prodromal symptoms appeared on the sixth, in some on the 12th, the 14th and the 55th day after the suppuration in the ear began. He says:

"To wait with operating until meningo-encephalitic symptoms appear means to allow us to become checkmated almost with certainty. It is better to prevent them by liberally opening the apophysis. Each time when we witnessed interference, or when we interfered ourselves when there was no brain complication present, we had only noted success. On the other hand, we have seen, at various times, patients succumb to brain complications who refused operation before those symptoms appeared."

Dr. Brindel comes to the following conclusion: "Demonstrating by the experience which we have had and which we have daily in the ear clinic of the faculty of Bordeaux, the dangers of waiting in ear suppuration, I have tried to bring forward the necessity to discover and to treat as quickly as possible the most common complication, the mastoiditis, under whatever form it presents itself."

We readily see that the diseased middle ear and its relations to the adjacent parts can very well be compared with diseased organs in the abdominal cavity. In abdominal work, be it an affection of the gall-bladder or of the appendix, etc., early operation gives good results. Adhesions or peritonitis make an otherwise easy operation difficult and do not admit of such a favorable prognosis. In diseases of the ear the same can be said of sinus phlebitis, meningitis, etc.

4. That the mastoid operation is free of danger in the very great majority of cases if performed by skillful hands can be seen by the fact that in late years a total facial paralysis caused by injury of the facial nerve seems to be a very rare occurrence. As reasons for this must be given that nowadays aural surgeons who perform operations on the middle ear have seen the necessity of working on specimens.

If my memory serves me right, I have been told by a German colleague, who did post-graduate work in Berlin at the same time that I did, that he performed the radical operation ninety times, or more, on the specimen, before he dared to do it on the living. It seems to me that work on specimens is indispensable for acquiring the necessary experience.

5. Concerning the fifth point, that patients who may recover without an operation get well more quickly if an operation is performed, we must confess that the statement does not admit of a proof which may be called mathematically correct, because the possibility of indisputable comparison is removed in either instance. We must rely more upon our own and our patient's judgment in general. I do not doubt that a great many aurists who treated patients in whom both ears were affected, but in whom threatening symptoms were only present on one side, will hear, soon after surgical interference, expressions of surprise on the part of the patient that the operated ear improves more quickly than the other, although it was the worse. We can assume, with a certain degree of correctness, that the operation hastened recovery because the more seriously affected ear improved more quickly than the less seriously affected.

6. That an exploratory operation, in case of doubt, is justified, if there do not exist serious contra-indications, can be learned from our previous remarks. Illustrative of this point that it is better to operate in case of doubt, may be the following remarks by Dench (V):

"I have previously reported a number of cases in which extensive mastoid involvement has occurred where the evidences of inflammation of the mastoid were extremely obscure. In all instances when I have operated earlier than my better judgment would have allowed me to do, I have found an extensive destruction of the bony structures."

Even if a number of patients may have been cured without an operation, we can fairly well assume that just as great a

number may have died because a simple operation was not performed soon enough. It is better, in my opinion, to operate on a hundred patients of whom even fifty might have been cured without an operation than to risk the life of a single patient by an ultra conservative method. We should consider that early interference is simple and makes conditions, to a comparatively great degree, certain, where they would otherwise remain uncertain.

In conclusion, I must express satisfaction that the interest in otology has increased in the State Medical Society. In the year 1900 I had the honor to read the only paper on the ear, and was granted between five and about ten minutes time to read it. In 1901 there was only one paper on the subject, by Dr. Stockwell, of Port Huron. This year we have four on the program. May the increased interest continue.

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DISCUSSION.

EUGENE SMITH, DETROIT.

As one of the specialists of the association, I feel honored by this large attendance. It is a notorious fact that when a specialist reads a paper before the association, which is intended, not for the benefit of the specialist, but for the benefit of the general practitioners, they keep out of the way and we have an attendance of specialists; hence the encouragement to prepare papers for our State Society. I can say this very freely because I am not particularly interested in a paper at the present time; that is, I haven't a paper prepared. These subjects, to all specialists, of course, are interesting.

With regard to Dr. Bulson's paper I wish to state that all earaches in children are by no means inflammatory in character. We do find neuralgic conditions, possibly inflammatory, so far as the neuritis is concerned; still we find a great many cases where the earaches are not dependent upon middle ear inflammations; hence the physician should make a careful examination to find the exact condition with regard to his treatment; otherwise the paper is perfect and the suggestions are perfect.

The paper read by Dr. Amberg speaks for itself and there is nothing to discuss.

Dr. Campbell's paper, sifted down, or resolved to its meaty part, counsels conservatism. *Early operation is conservatism* in these cases.

With regard to Dr. Gillman's paper, the first case he speaks of (the case of the child), it was not an inflammation of the mastoid proper, it was a periostitis of the mastoid, the condition we used to make Wilde's incisions for, and he practically made a Wilde's incision when he made the large incision in the meatus.

The so-called term paracentesis is a mere puncture, and that is almost useless. A long, free incision should be made, and a physician ought not to be afraid to make it early in all these cases whether the drum membrane is bulging or not, when there is a good deal of inflammation and a rise in temperature.

About two months ago I saw in ten days three brain cases, two of which I saw in consultation—one an abscess of the temporo-sphenoidal bone.

I trephined the temporal bone, put in a trocar and got out half an ounce or nearly an ounce of pus. The patient lived twenty-four hours, but we confirmed the diagnosis. Another case, where the mastoid operation was made ten days before, without finding pus, being called in consultation, I diagnosticated it septic thrombosis, which was confirmed by another operation.

Within a week I was called to see a case with a history of earache. It was the case of a child four or five years of age; temperature 101. Some ear drops were used the first night. The next day the family doctor called to see the patient and found the little one with a temperature of 103, suffering with earache and a rash across the chest. He thought he was going to have a case of scarlet fever; but when he went that evening to see the patient the rash had entirely disappeared. The temperature was still up. He kept on with the drops and some medicine internally. That night the child developed a high delirium; I was called in consultation the next day. The temperature was 103. Examining the ear, I found the upper portion of the drum was red and bulging, and I made a free incision. There was a little serous exudation, and within fifteen minutes the child became quiet from the incision, but remained more or less delirious all that night. The next morning the delirium had gone, the temperature, which had been 103, had dropped to 100. I was called again the next day, as the discharge had stopped. I found the incision closed, though it had been a free one; I made another incision, a very large one, and the patient went on from that moment without any discharge from the ear except a little serous discharge to a perfect recovery. These three cases of brain disease, occurring in so short a time, illustrate the importance of these ear cases, and I haven't the slightest doubt if all these cases could have been operated on early, they would have recovered.

I am one of those who contend that the moment you find, or are satisfied in your own mind that you have a mastoid trouble (disease of the mastoid cells and antrum), that you should operate. Don't wait for the grouping of symptoms. There are no symptoms alike in all cases; you must depend upon the individual case and your knowledge of such cases.

With regard to the case that Dr. Gillman speaks of, that went on to septic thrombosis and to brain trouble, I believe that did not occur as a result of the operation, but as a result of an incomplete operation. There are too many operators who are satisfied with getting off the external layer of the skull and opening the cells. If they find a little pus in the larger cells they are satisfied; I have

assisted men in operations when they wanted to stop too soon. I recall one case, a physician, a member of this society; I was assisting in the operation; when the operator opened the cells and found a little pus, he said, "That is enough." I said, "No, I am a little persistent in these cases; let me take the spoon." I was examining with the spoon, when it suddenly passed through the posterior wall of the mastoid process into the triangle of the neck—the cervical region—and out welled a quantity of pus, very nearly an ounce. The operator was surprised and said, "Where does that come from?" It was what is known to aurists as Bezold's variety of mastoiditis. My impression is that this case would have gone on, nobody knows where, had not the operation been thorough. It should be thorough in chronic cases always. Not merely the opening of the external layer of the skull and getting into the mastoid cells, giving vent to a little pus and scraping the cells; we should open the antrum, and we should examine the sinus; we should examine carefully with a probe the tympanic walls. These are the cases that usually get well, and many of those that do not get well are the cases which have not been thoroughly operated upon.

C. H. BAKER, BAY CITY.

I want to endorse the remarks of the last speaker in regard to conservatism in the treatment of cases of mastoid abscesses. I had a series of patients last winter in which there was very little pain and very few symptoms of mastoid involvement. One patient had been treated by a general practitioner, at the time I saw the patient, about ten days. There was no temperature, the pulse was good, and the boy was feeling pretty well, except that his ear was discharging, and on examination I found quite a collection of pus in the meatus. I cleaned that out and found the tympanic wall bulging into the canal. As soon as the outer wall of the mastoid was removed I passed the probe in and explored it a little and found the inner wall perforated, as my probe passed directly into the temporal fossa. That case lasted ten days without any of the symptoms which we have been taught to depend upon as diagnostic, and in that case, if we had employed conservatism, waiting for symptoms of pain, etc., I am satisfied that the patient's life would have been lost.

I believe more patients lose their lives in efforts to prevent mastoid operations than lose their lives by early operations. Some of us, as has been said, may have gone too far, but I think far fewer have failed in that direction than in the other. As an example of how rapidly a case of

mastoid inflammation may develop, I remember one case that, when I was called, the patient's temperature was high (I have forgotten the degree), the pulse was bad and the color bad, and there was a profuse discharge from the ear and a slight swelling over the mastoid, with considerable tenderness, and when I opened that mastoid, which I did within twelve hours, I found the entire mastoid process, which was one of the variety that is very spongy and full of air cells, saturated with fluid pus, and in that case I cannot believe that any amount of incisions done through the meatus would have prevented the necessity of mastoid operation. One of my patients had had discharge from the tympanic cavity for a number of weeks, following acute earache. I didn't see the case from the beginning, but at the time I was called in consultation she had no temperature and no pain. She was doing her household work; she merely had a continuous discharge of rather thick pus, and on deep pressure over the bony meatus I detected a slight tenderness, and there was a very little bulging of Schrapnell's membrane. When the outer wall was removed I found the surprising condition of an entirely broken down mastoid, with none of the walls remaining intact, and the whole mastoid process converted into one cavity with thick pus filling it up.

I insist you are more conservative and you are doing better surgery if you do the early operation as soon as you have satisfied yourself that the pus is there, and that in all probability you are not going to get sufficient drainage by way of the natural openings.

J. A. KING, MANISTEE.

I would like to say a word or two from the standpoint of the country doctor. I would first like to ask a question about this incision in the drum membrane. Now I know nothing about Wilde's incision or any other kind of incision. I sometimes puncture the drum membrane, but I am afraid of going too far; afraid of doing damage, and I want Dr. Gillman to tell me whether there is danger of striking something that I ought not to because I don't know?

I have been practicing some eighteen years where specialists are very few and far between, and I meet, as all country doctors do, every once in a while, with suppurative mastoiditis, and when I think it suppurative mastoiditis, I sometimes cut through, and always find pus. I never had a patient die, whether I operated or didn't operate, in all those eighteen years, except one case, and in that I advised operation for three months, but the patient

put it off. He finally came into my office one day to get relief from pain. I told him I didn't think he would live to be operated on in Ann Arbor; that I thought he would live to get there, and probably to go on the table, but unless the operation was done at once his chances for living were very slim, and not better than one in a hundred if operated upon immediately. He agreed with me, and I operated, and he died in forty-eight hours. That is the only case that I have ever had that died from mastoiditis. I see cases frequently where I think they have mastoiditis, but I do not think the trouble is very bad, and I do not operate, and they get well.

A MEMBER.

I would like to ask the members of this Association who are practicing ear work if they ever use any local anesthetics in the performance of paracentesis? In a great many cases paracentesis can be performed without pain.

I was called over to a little town in Canada some time ago to see a little girl with mastoid trouble; as near as I could get the history she had been sick about a week or ten days; the ear stood out at right angles, and in the examination of the ear I tried to clear the canal as well as possible; it was absolutely impossible to see the drum; I took a lance and thought I would see what it was; I made a long, free opening in the canal and got a gush of pus; I thought it must be a large cavity, and I took a probe and was surprised to find that the whole process back there was all broken down. I could pass the probe down in there; I took a curette and cleaned it out as well as possible; it was in a little, dark room, with no lamps of any kind; I got no light, but I cleaned the cavity out as well as possible and irrigated it with a little boiling water, and left it in charge of the physician there. The little girl was badly nourished, and the surroundings were so bad that the case was rather tardy, but she recovered. I haven't any doubt but that I had performed a mastoid operation through the canal, or that it was already performed. The patient was four years old and it was to me a rather unusual case.

In conservative surgery of the ear or any kind of surgery, the personal equation enters into it largely; it is a matter with the doctor. A conservative surgeon is a man with good clear judgment—first being possessed with knowledge and being acquainted with the trouble he is attacking, and then using good judgment—it is purely a matter of judgment. There are some men so constituted that it is impossible to be conservative

or practical, or anything else; they will rush in in some places and will hold off in others where they ought to go; and really it resolves itself into a matter of good judgment.

DON M. CAMPBELL, DETROIT.

I have very little to add. Everything has been said that can be said upon the subject.

We are not very far apart in the treatment of mastoiditis. Dr. Baker cites a case where the trouble was ten days old; if the doctor had seen that case when it was one day old instead of ten days, and he had examined it and found tenderness over the antrum and over the mastoid tip, he would not, I think, have opened the mastoid the second or third day, although there are members of the profession who would open it even so early as that in acute cases; that case should have been treated during the second, third, fourth and fifth days by the ordinary conservative method of treatment, and if it was not proceeding favorably at the end of five or six days, the mastoid should then have been opened, so that we are not very far apart really in our management of these cases. It is only a question of whether we are going to open it, just because there is a little tenderness in the mastoid, or whether we will give the patient the benefit of a few days of treatment, and then if the disease does not yield, open it.

R. W. GILLMAN, DETROIT.

In the preparation of Dr. Campbell's paper and mine, it might seem almost as if we had consulted one another, and written in unison.

As regards the first case reported in my paper, I am sorry to be obliged to differ with Dr. Smith. He says it was only a case of periostitis; I entirely disagree with him. Authorities, who have investigated the relationship between purulent inflammation of the middle ear and mastoiditis, claim that in every case of otitis media purulenta there is more or less mastoid involvement. Indeed, the middle ear and the mastoid process may be regarded as one.

I do not want it understood that I do not advocate operation at an early stage of the disease when necessary; but I do believe it is common sense and good surgery to give the patient the benefit of early treatment, without premature chiseling into the mastoid process. I claim it was conservatism to operate early in the case which I reported with a temperature of only $99\frac{1}{2}^{\circ}$, because I saw symptoms which demanded immediate opening of the mastoid cells.

I must be very fortunate; I have been working for twelve years in hospital and private practice,

and have escaped the horrible experience described by my esteemed friend as consequent on not immediately operating on every sensitive mastoid. I have never signed a death certificate. I was associated with Dr. Smith in hospital and private practice for two years and a half, and during that time I never saw him open a single mastoid process; yet now, to-day, he has turned the corner, so to speak, and advises immediate operation in every single case of the disease.

As to the opening of the bone being a simple operation, it may or may not be true; but take for instance the case of a merchant, a very busy man, who comes to me for relief of an earache with marked symptoms of mastoiditis of a few days' standing: I am not going to say to him, "Go to the hospital—the mastoid cells must be at once opened or you may die." Such treatment would confine him in the hospital or his home from three to six weeks, perhaps without the least necessity, as within twenty-four hours the patient might respond to milder remedies. It is in just such a case that the good judgment and experience of the specialist is valuable. There are cases in which twenty-four hours would be too long a delay before opening the mastoid, and others in which a postponement of three weeks or longer would not be a dangerous course to pursue.

CURETTINGS—THE VALUE AND NECESSITY OF MICROSCOPIC EXAMINATION.

R. GRACE HENDRICK,
Jackson.

It is the purpose of this paper to point out as clearly and concisely as possible the practical aid the microscope offers in the diagnosis of uterine conditions, especially as to the character of inflammatory affections, the relation of inflammatory affections to neoplasms, both benign and malignant, and the evidences of malignancy.

Much work has been done and many articles written on this subject, but no exhaustive review of the literature will be attempted here. In 1853, Recamier published his work on uterine fungosities and their manner of treatment. We are told

by Leclerc (Recamier's secretary) that before 1843 no one had ventured to cleanse the interior of the uterus. Another contemporary described the iron spoon which he used and called attention to the fact that he described and diagnosed hyperplastic endometritis. His work soon drew the attention of physicians and the subject was investigated by numerous workers, among whom we may mention Velpeau, Robert, Guerineau, Dubois, Malgani and Moreau. The first microscopic investigation of these conditions was recorded in 1848 by Robin, then the first histologist of Paris, followed in 1853 by Ferrier, who used the microscope in the diagnosis of curettings. In the same year, Nelaton sharply differentiated fungosities, polyps, and cancers of the uterus, and the classic pioneer paper of Ruge and Veit in Germany was the first attempt at a classification of endometritis, dividing it into hyperplastic, atrophic and diffuse forms.

Before going farther, it may be well to say a word about the technic of curetting from the pathologist's standpoint, as it may be essentially different from that ordinarily used for therapeutic purposes. In order to make a diagnosis with certainty, it is, in many cases, necessary to examine the entire mucous membrane of the uterus, since, as it is well known, one part of the endometrium may be fairly normal, while other portions show advanced inflammatory changes, or even malignant conditions. The curetting, therefore, when undertaken for diagnostic purposes, should be deep and thorough and all pieces should be saved and examined. Only in this way can early malignant changes be detected and the advisability of operative interference determined.

Inflammations are without doubt the most common pathological conditions of the uterus. Hall, whose gynecological treatment of the insane for the past four years is of great interest and worthy of much more than passing notice, says: "By far the greatest number of cases in any class were those of the inflammatory class."

Inflammations may be first divided into pseudo-inflammations, having no recognizable bacterial origin, and true or infective inflammations, in which a bacterial origin may be shown. The pseudo-inflammations are chronic in form and may be either interstitial or granular. The interstitial form differs in degree, being either simple, with some increase of stroma cells and more marked increase of intercellular substance, or hypertrophic, endometritis interstitialis polyposa, in which there is a greater proliferation of the stroma cells. In some cases, the mucous membrane becomes thinner than normal and we have endometritis interstitialis atrophica. If a tissue infiltrate is especially prominent, the condition is known as endometritis interstitialis exudativa, and any of the forms mentioned may be hemorrhagic.

In the glandular type, endometritis glandularis, while the interstitial tissue may be increased, the characteristic feature of the pathologic picture is an hyperplasia of the uterine glands. Endometritis glandularis may be divided into three sub-classes, differing rather in degree than in kind. These are the simple form, the hyperplastic, and the adenomatous type, in which the glands are increased both in number and in size and because of their atypical branching, resemble an adenoma. The differences in the lines of treatment, the greater resistance of the latter to any

form of treatment, and the frequency with which the glandular inflammation is associated with the formation of new growths, make the recognition of the type of inflammation with which one has to deal of the greatest value to the practitioner. This becomes practical when we consider that the majority of such uteri are curetted as a method of treatment, and the microscopic examination of the curettings, revealing not only the type of inflammation but also the stage to which it has progressed, cannot fail to be of great advantage.

The most common form of infective inflammation is endometritis purulenta, which may be due to pyogenic germs, to the gonococcus, the pneumococcus, or to the colon bacillus. A definite membrane may be formed, as in the diphtheritic form, or it may become gangrenous or emphysematous. Among the forms of infective endometritis the general practitioner is especially concerned with endometritis puerperalis. As the endometrium is the main point from which the infection spreads throughout the body, the study of the curettings gives a clear picture of the extent and character of the infection. The tuberculous inflammation may also be recognized from the curettings, as the tubercles are usually spread diffusely through the mucous membranes. Since the early symptoms are those of a simple endometritis, the microscope is the only possible means of diagnosing the condition. The increasing number of tuberculous uteri and placentæ makes the subject interesting and the diagnosis of all cases important. To the general practitioner, more than to any other, comes the opportunity of securing specimens of the acute inflammations and it is readily

seen how important it is to study all pieces of membrane obtained by washing or curtetting the post partum uterus, not only as an aid to diagnosis and prognosis, but also to extend the knowledge of the subject and to put the classification on a more solid basis. With inflammations should be classed membranous dysmenorrhoea, the membrane of which, since it somewhat resembles the true decidua membrane, is an especially suggestive field for study.

Endometritis.

Pseudo-endometritis (chronic).

Endometritis Interstitialis.

Endometritis Interstitialis Polyposa.

Endometritis Interstitialis Atrophica.

Endometritis Interstitialis Exudativa.

Endometritis Interstitialis Hemorrhagica.

Endometritis Glandularis.

Endometritis Glandularis Simplex.

Endometritis Glandularis Hyperplastica.

Endometritis Glandularis Adenomatosa.

Endometritis Glandularis Cystica.

Endometritis Interstitialis et Glandularis.

Infective Endometritis.

Endometritis Purulenta.

Endometritis Diphtheritica.

Endometritis Tuberculous.

Endometritis Syphilitica.

Endometritis Puerperalis.

Endometritis Gangrenosa (Emphysematous).

Membranous Dysmenorrhoea.

The line is very hard to draw between the advanced stage of glandular inflamma-

tion and the adenoma. As Ziegler clearly states it: "There are glandular formations in glands which are with difficulty distinguished from adenomata." He also says: "There appear in the mucous membrane of the intestine and uterus developments which, from the glands contained in them, resemble adenomata and which are reckoned by many writers, on account of the limited area of their growth, among the adenomata. Nevertheless, they ought rather to be called glandular hypertrophies because of the normal cells lining the tubules."

Some recent work done by Dorland and Babcock and others point to the frequency with which adeno-carcinoma and fibromyoma are associated. They show that to avoid errors in diagnosis it becomes necessary to curette the endometrium of patients suffering from benign growths. Indeed Radenmacher affirms that all cases of so-called carcinomatous degeneration of uterine fibromyomata are examples of secondary infiltration of cancer cells from diseased endometrium. Schanta, in his report, gives eleven cases of carcinomatous or sarcomatous degeneration of the cervix, which had been left behind in abdominal hysterectomies. He adds: "With a view to the formation of more definite views on these points, it would be well to place on record every case of malignant degeneration of fibroids." This is illustrated by the case of Mrs. T., aged fifty-one. Has had four children and always been well until the last year, which has been marked by periods of flooding. Physical examination showed the uterus two and a half or three times the normal size. Microscopical examination, after a thorough curettment, showed adeno-carcinomatous areas. Hys-

terectomy was performed and the enlargement was found to be due to myo-fibroma, but areas of malignancy were found deep down in the fundus. The group of neoplasms that concerns us most in the study of curettings is that of adenoma and adeno-carcinoma. The clinical history of these cases is similar to that of a simple endometritis and from symptoms alone no early diagnosis can be made. Baldy speaks of the three great symptoms of cancer and dwells upon hemorrhage. Hemorrhage, when it occurs, is suggestive of carcinomatous conditions, but it may also occur in hemorrhagic endometritis and also in cases of fibroids and polyps. On the other hand, incipient adeno-carcinomatous conditions may often be diagnosed by the microscope long before any hemorrhagic symptoms call attention to the condition. The patients have been curetted simply as a curative measure in cases diagnosed as endometritis before microscopic examination. Pain is the second pathognomonic symptom mentioned by Baldy, but who has not seen well advanced cases of carcinoma without pain and who has not heard patients say: "It cannot be cancer, for I have had no pain." In regard to his third great symptom — odorous discharges — we would say it is rather late when these can be detected. To quote his own words: "It will do little good ostrich-like to bury our heads in the sands of self-complacency and sit with our hands folded whilst our patients die."

Not in loss of flesh and strength do we find a guide, for some patients, suffering from inoperable carcinoma of some years' standing, are supported by tonics and nucleins so that they show no loss of flesh or color. We must then conclude that the

evidences of malignancy found in clinical histories are vague and uncertain and that a microscopic study of curettings, revealing the irregular arrangement of the glands and the atypical cells pushing away from the basement membrane, can alone make the diagnosis certain. The diagnosis does more. It reveals the seat of the disease. Humiston says: "I believe it is of vital importance to know the seat of the malignant growth and particularly should its pathologic variety be determined by a careful microscopic examination before operation."

There is still another class of cases in which only the microscope can give a clue to the actual conditions, viz: cases in which decidual cells are found. These may be due to subinvolution of the uterus, or to retentio deciduæ. Malignant deciduoma may develop in these conditions, giving rise to symptoms of sepsis. The cells of the chorionic villi may proliferate, forming the syncytium malignum, the developments varying, so that we must depend upon the microscope for the diagnosis.

The microscope, therefore, occupies a position of primary importance in the determination of the character of pelvic diseases, especially in regard to the type of inflammation, the relation of adenomata to inflammation, and the change of benign to malignant growths. In the field of decidual growths, it furnishes the only clue by which we can hope to establish the nature of the process, while clinical symptoms alone should never be relied upon for the diagnosis of malignancy.

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DISCUSSION.

REUBEN PETERSON, ANN ARBOR.

I think this is a most admirable paper, and I wish that we saw more work like this in our State Society. I think that there is the greatest need for emphasis upon the point, that the general practitioner is the first to be consulted in these cases of malignancy, and that early treatment lies largely in his hands. During the past year I have had over a dozen cases of uterine carcinoma sent to me for operation at the University Hospital, and every one of these poor women could only be treated palliatively; not one

case did I receive where the radical operation could be performed. Even the radical operation will not prove of much avail until the general practitioner puts in practice some of the precepts of Dr. Hendrick's paper. I do not agree at all with Dr. Baldy, of Philadelphia, in his plea that for early diagnosis of carcinoma of the uterus we must rely more on the symptoms and less upon the use of the microscope. The symptoms in uterine carcinoma are apt to be very vague and far from pathognomonic, and should simply serve as indications that a microscopic examination of the suspected one should be made.

W. F. METCALF, DETROIT.

I might take this occasion to compliment the essayist upon the paper. Dr. Peterson has said more clearly than I what I would wish to express. The cases that are referred to us for operation for carcinoma are usually so far advanced as to be beyond hope of relief, further than by cauterization and temporizing. When the disease has so far advanced as to cause infiltration and infection of the lymphatics, I have really come to the conclusion that operation is not justifiable. In a number of those cases I have done abdominal section, and done thorough operation, removing the entire glands of the pelvis, but I have about given it up, and until the general practitioners can realize the importance of early diagnosis, these women must die. Heretofore, before this year, we have been somewhat handicapped in Detroit because of not having facilities for having these examinations made, but last January was established the Detroit Clinical Laboratory, which is accessible to every physician in the city or any physician in the state, and when any such question arises, or when curettement has to be done by the general practitioner, or by anyone in the city, there is no excuse for his not having this examination made. If he waits until the diagnosis is easily made, it will be too late to save the life in the majority of cases.

A. N. COLLINS, DETROIT.

I wish to express my commendation of the spirit of the paper and its accuracy; also the scientific work done upon the paper, and endorse fully the ideas advanced. Unquestionably many of these cases could be rescued were the early work advocated by the doctor done; but as a semi-general practitioner, who has seen a number of these cases, I can say that many times, before they fall into the hands of the general practitioner, these cases have advanced too far for successful surgical work. Of course we are willing to take advice from the specialists, and we

are willing to be criticized, but I think in many cases the patients themselves, owing to the lack of symptoms which the doctor well expressed, fail to call any physician's attention to these cases until the time is past for entirely eliminating the cancerous cells.

T. S. BURR, ANN ARBOR.

I want to add my compliments to those which have been given to Dr. Hendrick on her paper. It seems to me that we must not only attend to the microscopical diagnosis of these curettings, etc., when we are able to make them, but it is the duty of every physician to educate the women among whom he practices as to the importance and seriousness of any strange symptoms which may come to their notice in connection with the uterus, especially at the time of the meno-pause. I do not think that the fact that these women come to us too late is due entirely to the doctor. It is due very frequently to the relatives and friends of the patient, who urge her against submitting to any examination, and point out the horrible ordeal that she must go through if she goes to the doctor's office. We must educate the women, we must impress upon them the seriousness of the condition and the importance of seeking early relief. Then the doctor will have a chance to get his curetting and make his microscopical examination, and then the surgeon will have his chance to operate in time.

CONSERVATISM IN THE TREATMENT OF THE INFERIOR TURBINATE.

J. VERNON WHITE,
Detroit.

As an introduction to a few remarks upon the treatment of hypertrophied turbinates I shall call attention to some physiological facts of importance in this connection. I present these facts for consideration more particularly because there is a tendency in the modern treatment of diseased pituitary membrane and turbinated bodies to ignore their function. This tendency is manifest in the harsh measures employed; in the ruthless destruction of tissue, and in the worthless palliatives that

have become so popular with the laity and so remunerative to the unscrupulous practitioner.

The extent of the nasal mucosa is greatly increased by deflection, as well as by continuation into large sinuses. The object of so great an area of mucous membrane is obvious and well known; it forms a warming surface for the air that is to descend into the lungs. To this end also there is a rich blood supply. The vessels lie in the connective tissue beneath the basement membrane and are especially abundant in the region of the inferior turbinate. The tissue over this bone is thick and erectile, admitting of enormous distension.

Now this arrangement of mucous membrane and blood vessels is admirably adapted to the regulation of the temperature of the inspired air, for not only is there an extensive surface but this surface is so reduplicated that many recesses are formed and the air is compelled to pass in close contact with the mucosa. In addition to this the sinuses contain residual air, which by diffusion greatly accelerates the heating of the newly inspired air.

This heating apparatus is provided with a reflex or automatic regulator, so that the colder the air the hotter becomes the mucosa. The increase in temperature is brought about by a dilatation of the vessels caused by the action of the cold air upon the vasomotor nerves.

In addition to regulating the temperature of the inspired air the nasal mucosa is equally efficient in providing and regulating moisture, but I shall not here burden you with a discussion of nasal secretion. However, before leaving this question of physiology I desire to call attention to another, and I believe a very im-

portant function of the mucous membrane of the nasal cavity. I refer to the regulation of blood pressure. When a sudden change is made from a warm to a cold environment, there is an immediate powerful contraction of all the cutaneous vessels—the blood is forced from the surface of the body; simultaneously blood pressure is increased. Now, fortunately, the rise in the blood pressure is not in proportion to the cutaneous vascular contraction. If it were there would be serious interference with many of the vital functions and organs, and as atmospheric changes are not only not infrequent but very sudden and pronounced, the human organism would not long maintain its vitality. If the digestive organs, the liver and kidneys were subjected to as frequent and as great vascular changes as the nasal mucosa, there would be a radical change in mortuary statistics. Now just here I wish to call attention to a most important function of the nasal mucosa and its unique blood vessels. When there is a sudden fall in the mercury, or for any other reason the body is subjected to excessive conduction and radiation of heat from the surface, followed by an immediate contraction of cutaneous vessels, there is at that instant a dilatation of the vessels in the nasal mucous membrane, with great engorgement of the erectile tissue. The physiological activity of the sweat glands is reduced, but there is a tremendous stimulus given to the secretory glands of the Schneiderian membrane. In this way the vascular system has an outlet, a sort of safety valve. There is a wonderful economy of nature in this arrangement, for the engorgement of the nasal blood vessels serves a double purpose under the circumstances—increasing

the temperature in the heating apparatus and at the same time decreasing the tension in blood vessels of the organism. The nasal mucosa is therefore not only a warming pan—it is also a safety valve. Now in a healthy individual the filling up of the nasal vessels for the prevention and regulation of extreme blood pressure is a perfect physiological process, and is devoid of any inconvenience. When the cause is removed these vessels are again emptied and the secretion diminished. This process occurs frequently and it is only when the atmospheric changes are excessive, or after very prolonged exposure, that the engorgement may develop into an inflammation. More often, however, there is some systemic derangement, forming a complication, such as constipation, torpidity of kidneys or liver. Under such circumstances the Schneiderian membrane is exposed to prolonged engorgement. The slightest breath of fresh air may be sufficient to produce a cold in the head which may prove stubborn and intractable.

Now, to revert for a moment to the physiological action of this membrane, it is necessary to distinguish facts from theory. There can be no question about the anatomical arrangement of nasal mucous membrane and its rich vascularity. That there is great engorgement of these vessels when the body is exposed to cold is also beyond dispute. It is also a fact that a similar hyperaemia is not produced in other tissues. Now in normal cases we know that the blood pressure does not rise *pari passu* with the contraction of the cutaneous vessels. It seems, therefore, a legitimate inference that the hyperaemia of the mucous membrane of the nose and its rapid excretion prevents the excessive

blood pressure. It is well known that very sensitive sympathetic relations exist between the mucous membrane and the skin. The embryological resemblance of the epiblastic and hypoblastic tissues always remain in spite of the many differentiations for the various physiological functions, and like true brothers they bear each other's burdens.

The anatomical structures of the nose may to a certain extent account for the ready engorgement of the nasal vessels when subjected to increased pressure. Unlike the other mucous surfaces the lining of the nasal fossæ remain patent, and accordingly the underlying blood vessels are unsupported. This much space has been devoted to the function of this organ, because I believe that such consideration forms a proper basis for rational treatment and at the same time is in itself a very strong plea for conservatism.

The most common etiological factor in the causation of acute rhinitis is exposure to cold and sudden changes of temperature. To this must be added the inhalation of irritating particles and gases. A repeated recurrence of acute rhinitis from whatever cause leads to vasomotor derangement, dilatation of the vessels and increased activity of the mucous glands, ultimately ending in engorgement of the erectile tissue and escape of leucocytes. This last condition is designated simple hypertrophy. John McKenzie believes it is the result of frequently recurring erections associated with repeated attacks of acute and subacute catarrh. Bosworth does not recognize the above of importance, but teaches that genuine hypertrophy is nearly always subsequent to anterior stenosis, due to septal outgrowths and deformities, and less frequently to collapse of the alae. Lennox Browne

shows that fifty per cent. of all cases suffer from hypertrophic rhinitis and about fifty per cent. of those were the subjects of very obvious deviations of the septum, while those with spurs and deviations in connection with hypertrophy were about thirty per cent. Thus it will be seen that anterior stenosis and spurs play a very important part in the treatment of hypertrophies.

When, in the absence of acute attacks, the nasal channel becomes persistently closed from time to time, there is a certain degree of hypertrophy present, along with a persistent disturbance of nutrition and a perversion of the processes of elimination.

Sneezing is a symptom often experienced when hypertrophic changes are present. With it are associated a free watery discharge from the nose and effusion and redness of the eyes. These symptoms may be quite ephemeral and may be unattended by any visible constitutional effects. They are significant inasmuch as they indicate a sensitive organism, rather than any peculiarity in the pathologic condition.

In the treatment, the diet and the hygienic conditions in general must never be lost sight of. When we remember that there is not only a small patch of diseased mucous membrane but a general derangement of the vasomotor system, and a disturbance of circulation, we must give first attention to systemic therapy. In this connection I believe the equalization of temperature is important. In bad cases, where there is an acute attack, to put the patient to bed is unquestionably the best means of obtaining an even, warm temperature.

A second indication is a light, easily digested diet—such a diet as will also be

easily eliminated. It should contain plenty of liquid.

By these means the blood should be coaxed, as it were, back to the remote tissues of the organism in increasing quantities.

The vasomotor nerves should be toned so that ordinary temperature changes could no longer throw it into confusion and destroy its inhibitory actions upon the constricting fibres of the vessels. I shall not dwell longer on this important part of the treatment, but shall here mention some local and medicinal measures that I have found useful. At the outset I wish to state, that while in certain cases local treatment is beneficial, in the majority of uncomplicated cases of acute rhinitis local applications of any kind are harmful. When there is excessive discharge I have found orthoform, pure or combined with sodium sozocodolate when insufflated, frequently to control the excessive discharge. Adrenalin affords temporary breathing space and is particularly recommended during acute tumefaction. Distilled extract of *Hammamelis* is particularly efficacious where there is epithelium desquamation.

In consideration of the transitory stage following the foregoing pathological change, one must determine how far it is prudent to pursue such treatment before resorting to more radical measures. Believing as I do in the great need of preserving as much as possible of the mucosa, I think it best to encourage the absorption of any redundant tissue. Iodine mixed with glycerine in the proportion of 1 to 20, or even stronger, and applied on cotton placed in situ until the tissue no longer responds, often yields good results.

A mixture of iodine and potassium

iodide, on account of its astringent and absorbent action, applied locally, acts well. Chinotropin, which is a combination of atropine and quinic acid, given in ten grain doses with plenty of carbonated waters in rheumatic and gouty conditions, is especially valuable where there is defective eliminating powers of the kidneys.

Electrical massage of the inferior turbinate body is beneficial in neurotic cases caused by faulty elimination. In these there is vascular dilatation with engorgement caused by an affection of the nerve terminals. The current should be applied from three to four minutes. This produces a thin mucous discharge, lessens the oedematous hypertrophy and leaves the mucous surface a light red.

Swabbing the surface with cotton and applying Boulton's solution, keeps the vessels for a longer time in a state of contraction, and encourages new cell proliferation.

Engelmann. Faradic massage augments the stimulating effects of massage and by the penetrating powers of the current extends its range of action to the deeper tissues, without adding to their superficial irritation. The calming sedative effects of the mechanical manipulation is likewise increased by the direct action of tension currents upon nerve terminals.

Chronic acid is used more generally now than in the past. It is particularly adapted to cases where the turbinate body is particularly spongy and yields to the action of adrenalin.

Golstien has devised a special trocar and canula to carry chronic acid into the submucous tissue for cauterization.

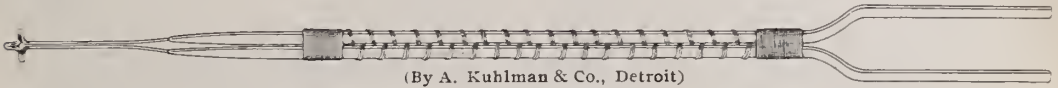
M. Gaudier, in 1898, reports cases (*Hamm methods*), in which he injected submucously zinc chloride with fair results.

Violette injects five drops of a ten per cent. solution of zinc chloride and in a few weeks the mucosa subsides to its normal size.

When there is no deformity of the nasal septum, or other growths obstructing the passage, and the tumefaction partially yielding to cocaine, I believe the galvanic cautery will do more to relieve this form of hypertrophy of the inferior turbinate than anything else. The objects to be attained by cauterization are, first, to secure as small a slough through the destruction of the mucosa as possible; secondly, to shrink the underlying vascular

of the organism in a sound condition is the best safeguard against this and most other diseases, but I wish to refer particularly to the necessity in this connection of taking proper care of ordinary acute attacks of rhinitis. As I have already stated, hygienic measures are of first importance; next to these, I believe, comes judicious medication. This should have for its purpose and end the reduction of blood pressure, the elimination of toxic material through the stimulation of the emunctories and the toning of the nervous system.

The first indication is filled better by



(By A. Kuhlman & Co., Detroit)

tissue and creates adhesions to the periosteum. This electrode (see plate) resembles some others in outline, only the platinum is so bent that there are three processes extending from one side, so when applied to the mucous membrane and the current turned on, by pressing lightly it burns its way deep down to the superficial layers of the mucosa, shrinking the vascular tissue and tucks down the redundant tissue to the periosteum, thus preventing a loss of mucosa which would naturally follow too much cauterization and encouraging atrophic changes.

Posterior hypertrophies can be reduced more safely by the cold snare on account of its proximity to the eustachian tube, than by any other means, and hypertrophies of the anterior extremity by scarification.

Finale. In this brief paper it is only possible to refer in outline to some of the measures useful in the conservative treatment of this very common disease. Before closing I wish to say a word about prophylaxis. Of course the maintenance

calomel than by any other drug.

Laboratory experimentation to the contrary, I believe that professional experience has established a fact that for a safe, rapid, cholagogue action, nothing quite equals the drug above mentioned.

DISCUSSION.

WILLIS S. ANDERSON, DETROIT.

I wish to commend the paper of Dr. White, if for no other reason than that he does not advocate any one method for all cases. I believe that the proper treatment of hypertrophic disease in the nose depends on treating each case according to the condition found, and not treating all cases by one method. I am very glad that Dr. White emphasizes this point.

The cautery knife which he has devised seems to me to be a very useful little knife in a certain number of cases. I can understand how some hypertrophies of the inferior turbinal, extending far back, would not be best treated by this knife. It seems to me a long, lineal cauterization would be more satisfactory, but for a great many cases his knife has decided advantages over some others.

J. V. WHITE, DETROIT.

The only remark I wish to make is that the knife I have passed out here is not made exactly as I would like it. The processes are not deep enough, but the general outline of the knife is my ideal one.

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Editorial

THE EXCELLENT WORK OF THE COUNCIL.

27 Counties Chartered. Membership,
1,200.

As it is now well known, the State is divided into twelve Councilor Districts, to conform to the present congressional apportionment.

The Districts comprise the following Counties respectively:

First District—Wayne.

Second District—Jackson, Lenawee, Monroe, Washtenaw.

Third District—Branch, Calhoun, Eaton, Hillsdale, Kalamazoo.

Fourth District—Allegan, Barry, Berrien, Cass, St. Joseph, Van Buren.

Fifth District—Ionia, Kent, Ottawa.

Sixth District—Genesee, Ingham, Livingston, Oakland.

Seventh District—Huron, Lapeer, Macomb, Sanilac, St. Clair.

Eighth District—Clinton, Saginaw, Shiawassee, Tuscola.

Ninth District—Benzie, Lake, Leelanaw, Manistee, Mason, Muskegon, Newaygo, Oceana, Wexford.

Tenth District—Alcona, Alpena, Arenac, Bay, Cheboygan, Crawford, Emmet, Gladwin, Iosco, Midland, Montmorency, Ogemaw, Oscoda, Otsego, Presque Ile.

Eleventh District—Antrim, Charlevoix, Clare, Grand Traverse, Gratiot, Isabella, Kalkaska, Mecosta, Missaukee, Montcalm, Osceola, Roscommon.

Twelfth District—Alger, Baraga, Chippewa, Delta, Dickinson, Gogebic, Houghton, Iron, Keweenaw, Luce, Mackinac, Marquette, Menominee, Ontonagon, Schoolcraft.

Since the reorganization the following County Societies have been chartered as Branches of the State Society and are in good working order:

First District—Wayne.

Second District—Jackson, Monroe.

Third District—Branch, Calhoun, Eaton, Hillsdale.

Fourth District—Allegan, Barry, Van Buren.

Fifth District—Ionia.

Sixth District—Genesee, Livingston, Oakland.

Seventh District—Lapeer, Sanilac.

Eighth District—Saginaw.

Ninth District—Manistee, Mason, Wexford.

Tenth District—Bay, Crawford, Montmorency, Ogemaw, Oscoda, Otsego.

Eleventh District—Grand Traverse, Gratiot, Mecosta, Montcalm, Roscommon,

Twelfth District—Houghton.

As the Counties of Ogemaw, Montmorency, Crawford, Oscoda, Roscommon, and Otsego are thinly populated and are adjacent, the physicians thereof have united in forming a County Society known as the O., M., C., O., R., O. County Society, which formation is permitted by the By-Laws of the State Society.

Most of the County Societies meet but once quarterly, so that it takes some time to get them organized, and when organized it has often been found desirable to keep the list of membership open until the following meeting, so that every physician of the County eligible to membership may join as a charter member.

The response to the appeal of the Councilors of the respective Districts has been so enthusiastic, the large enlistment of the members so gratifying, that the Society may be congratulated most heartily upon the work already accomplished.

To date the membership in the State Society has nearly reached the 1,200 mark; more than 750 of these are members of their County Societies. For the remaining members in most cases there has been no County Society to join. Yet in some instances old members of the State

Society have not yet joined their local organization. We do not feel that this is from any lack of appreciation or interest in the work of organization, but is more from procrastination. To these members we would earnestly appeal again for their support and their encouragement, which may be manifested by joining their respective County Societies at once. In this work we need the assistance of every member of the State Society.

Of those County Societies organized but not yet chartered, we would ask that they complete their work of organization at the earliest possible moment.

As only those County Societies which are chartered will be entitled to representation by delegates at the next annual meeting of the State Society, and as it is very important that we have a strongly representative meeting of the profession of the State, not the least of the old members of the State Society, it is urged that these members make every effort to organize a County Society in their respective Counties.

SOME FACTS AND FIGURES.

"What is the membership of the State Society?" "What has been its growth since its reorganization?" These questions are often asked. The old member who has had an active interest in the State Society for many years exhibits great surprise when told that there are 1,174 members, which number is almost daily increasing, and that in answer to his second question, the membership has nearly doubled since the meeting of June, 1902, at which time the reorganization was effected. The actual figures are as follows:

Members enrolled immediately after June, 1902, meeting..... 684
 New members who have joined through affiliated County Societies. 451
 Old members (who had been dropped for one cause or another) who have rejoined through County Societies. 39

Total State Society membership. . 1,174

The affiliated County Society membership is made up as follows:

1. State Society members (previously in good standing)..... 295
2. Members who had never been State Society members..... 451
3. "Dropped" members of State Society who have hereby regained their membership 39

Total County Society membership. 785

The difference in the above totals shows 389 State Society members unaffiliated with chartered County Societies, of which number 90 have not joined their respective County organizations, and 299 have, as yet, no such organization to join.

There are at this writing 27 chartered County Societies which include members from 32 counties. There are other societies formed but yet unchartered.

Through the energetic efforts of the Councilors of the State Society, County Society organization has been more rapid than even the most ardent advocate could have anticipated. Time alone will tell how well the interest in local societies will be kept up, and how lastingly this greatly and rapidly enlarged State organization is builded. The permanency of the Society no longer depends entirely on it and its officers, but rather on the officers, in fact, the individual members, of each County

Society. The decline of a County Society means a corresponding loss to the State Society, and to guard against this must be the aim of all. But when it is realized that each Councilor District is under the direct supervision of its Councilor, elected for six years, and responsible to the Council, and that THE JOURNAL will also keep in touch and in active work with every County Society, and that one of the principal functions of the Council is the nurture of these County Societies, no one can doubt the permanency of our organization.

Never before has such systematic work been done, and never before have the County Societies been Branches of and under the direct control of the Council, the President, Vice-Presidents, and other officers of the State Society.

THE PATHOLOGICAL EXHIBIT FOR THE MEETING OF 1903.

The Pathological Exhibit Committee has commenced planning for the next meeting. A large and well-lighted room has been secured which will give ample space for the gross specimens and many microscopes.

This very interesting and instructive adjunct to our annual meetings should be encouraged by every member of the Society who can contribute to the exhibit. By communicating early with the committee, of which Dr. Thaddeus Walker, Detroit Clinical Laboratory, 33 Mullett Street, Detroit, is the chairman, as to the nature of the material possible to send, exhibits can be classified into groups as anatomical, physiological, pathological, and bacteriological specimens, dealing

with particular subjects or phases of pathology. In order to make the exhibit of educational value, specimens should have complete histories and be carefully labelled and catalogued. Arrangements are being made also for exhibits of research and experimental work to illustrate the progress being made along these lines.

Commercial concerns can obtain space in another part of the building to show their instruments and products, which in many cases represent great progress in scientific medicine.

CRYPTORCHISM.

The testes in their normal course descend from their position in the embryo at the lower portion of the kidney along the psoas muscle, through the internal abdominal ring, then along the inguinal canal through the external ring and into the scrotum. They may be arrested at any point in their normal migratory course, and if so, this condition is known as cryptorchism. The abnormality may be divided into abdominal and inguinal. When the testes are retained within the abdomen no form of treatment is recommended. When retained in the inguinal canal they may be transplanted to their normal condition in the scrotum if the cord is not too short to permit of it. A plan of lengthening the cords, by separating the lower portion of the epididymis (the globus minor) from the body of the testis and making it a portion of the cord, was demonstrated before the Surgical Section of the Wayne County Medical Society November 3, 1902.

A photograph of a patient, twenty-one years of age, who had had his testes

transplanted one and a half years previous and cords lengthened by this method, was shown. The scrotum was well distended and the testes hung free.

SECTION WORK IN THE WAYNE COUNTY MEDICAL SOCIETY.

The principal problem confronting the directorate of a large medical society is how best to arouse the interest and utilize the often latent energy and ability of all its members.

It is safe to say that less than fifty per cent. of the profession can be considered *active* in society work, either as regards reasonable regularity of attendance or the contribution of papers or discussions. What is the matter with the other men? Simply that they have not found the society of personal value. Undoubtedly a man will get personal value from attendance alone, even if he contributes nothing, but to secure even his attendance we must first arouse his interest.

How can this best be done?

Perhaps seventy-five per cent. of the profession in Wayne County are general practitioners; fifteen per cent. are general practitioners doing considerable special work; ten per cent. are specialists. Hence seventy-five per cent. of the Wayne County Medical Society members are more interested in the etiology, diagnosis and treatment of pathological conditions presented in a broad, general way than in the technique of operations, which they do not do, or the description of cases rarely seen. Therefore, it seems rational to believe that interest may be stimulated, our average attendance increased, by catering in the weekly meetings largely to the needs of the general practitioner, at the same time

providing special meetings for the twenty-five per cent. interested in special work.

After considerable discussion individually, and as a Society, the following plan is being tried: Four Sections have been organized, each meeting once monthly on Monday evening; *i. e.*, first week, Surgery; second week, Internal Medicine and Pathology; third week, Obstetrics and Gynecology; fourth week, Eye, Ear, Nose and Throat.

Any member of the Society may register for Section work upon payment of one dollar yearly, registering and working in more than one Section if desired without extra charge. This special fee gives cohesion to the Sections and helps the Society defray the extra expense incurred by them. All Society members are welcomed at Section meetings, though not as active members unless registered as such. Each Section elects its own chairman and secretary, the eight Section officers constituting the Society's Standing Committee on Section Work, and the four Section secretaries, with a chairman appointed by the President, form the Society's Program Committee.

Thus the Sections are made an integral part of the Society work, and the program goes out weekly as a part of the Society's program.

Each Society member is expected to attend so far as possible five meetings a month, the weekly general meeting, and once monthly the Section in which he may be especially interested. There should be sufficient material in an active society of four to five hundred to provide an average of two papers for each general meeting, expecting the Sections to be maintained by the twenty-five per cent. who have asked for them.

Section work is a new thing in Wayne County, and, like every new thing, an experiment, dependent for success upon the energy and enthusiasm of its supporters.

It is hoped by it to forestall the formation of other societies to provide opportunity for special workers along special lines, and to interest the general practitioner in the general meetings through a broad program covering the general principles and fundamentals of medicine and surgery.

FRANK BURR TIBBALS,
*President, Wayne County
Medical Society.*

Communications.

MUST A MEMBER OF STATE SOCIETY AFFILIATE HIMSELF WITH HIS COUNTY SOCIETY?

Grand Rapids, Mich., Nov. 21, 1902.

A. P. Biddle, Editor:

Dear Dr. Biddle—In the November issue of THE JOURNAL Dr. Bulson contends that a physician cannot consider himself a member of the Michigan State Medical Society unless he be a member of an affiliated County Society. I have just come into the knowledge that this statement is occasioning a great deal of comment.

In making the above statement Dr. Bulson excludes from membership a great number of old and respected members, who have every reason to feel hurt at such a ruling; and it is the expression of such feelings that has come to me which brings me to the writing of this letter.

I regard Dr. Bulson as entirely wrong in this matter, and would advise that something in the way of an explanation appear in the next issue of THE JOURNAL.

Very truly yours,

CHAS. E. HOOKER.

Detroit, Mich., Nov. 22, 1902.

Chas. E. Hooker, M. D., Grand Rapids, Mich.:

Dear Dr. Hooker—With your permission your letter has been forwarded to Dr. Bulson.

If you refer to the paragraph, "In this connection I may say that I find quite a belief

among the members of the old Society that, if they pay the annual dues to the Society, they can hold their membership, and not necessarily be in affiliation with the County Society. The Constitution expressly states that the membership in the various County Medical Societies, reported by the Secretary of the same to the Secretary of the State Organization, shall constitute the membership of the latter," in Dr. Bulson's communication to THE JOURNAL of November, 1902. (Vol. 1, No. 3, page 138), I must state that I cannot agree with you. Dr. Bulson has given the only interpretation possible. I would respectfully refer you to the Constitution of the State Society, especially to Art. III., which defines the Component Society, and to Art. IV., Sec. 2, which defines the membership of the State Society. It has been ruled by the Council that a physician cannot be a member of his County Society without being a member of his State Society (See Editorial, "The County Society a Unit," JOURNAL, Vol. 1, No. 3, Nov., 1902, page 137); and it will undoubtedly be ruled that a physician, in whose County a regularly chartered branch Society exists, cannot remain, after a period to be fixed by the Council (which period will, undoubtedly, be liberal), a member of his State Society unless he is in affiliation with his County Society; and in this we have the backing of the American Medical Association, which will refuse admission to its ranks of any physician in the State of Michigan who is not on the roll of the State Society. The State Society and its Branches must be one to insure harmony and progress.

I would invite your attention also to the minutes of the General Sessions of the State Society at its Annual Meeting, published in this issue of THE JOURNAL, page 190.

I deeply regret that there should be any misunderstanding, for the encouragement and active support of the physicians of Kent County, and more especially of the older members of the Society, is needed and will be appreciated. It is hoped that the members to whom you refer will give this matter their most earnest consideration before taking any steps which will retard the onward march toward the goal which your officers have been so unselfishly working for.

Yours respectfully,

A. P. BIDDLE.

Jackson, Mich., Nov. 24, 1902.

A. P. Biddle, Editor:

Dear Dr. Biddle—I am in receipt of your letter of November 22nd, containing enclosure of a correspondence criticising, in part, certain statements made by me in my article as published in

the November JOURNAL of the Society. I regret, exceedingly, that there should be a misconception of the spirit and work of the Committee on Constitution and By-Laws by any "great number of old and respected members" of the old organization in regard to the purpose of the work of the new organization of the medical profession of Michigan.

It is plainly to be seen that the plan adopted, "without a dissenting vote," at the Port Huron meeting of the Michigan State Medical Society, was that "Component Societies shall consist of those County Medical Societies which hold charters from this Society." (See Article III., Constitution of the Michigan State Medical Society, JOURNAL, Vol. I, No. 2, Oct., 1902, page 90.)

Article IV., Sec. 2, reads: "The members of this Society shall be the members of the Component County Medical Societies." It will readily be seen that every County Society must necessarily be a unit of organization of the Michigan State Medical Society; and that when the new Constitution and By-Laws of the State Society was adopted it decreed the membership to consist of the members as defined in Section 2, Article IV., of the Constitution, above referred to.

However, express provision has been made by the officers of the State Society to retain as members those physicians who are affiliated with that Society, but who reside in Counties where no Component Society has been organized, until a time when such an organization shall have been perfected and the same affiliated with the State Society.

This interpretation is the only one that can be given to the articles referred to, and the only alternative for the officers of the State Society. The same provision carries equally with it the necessity of every member of the County Organization being also a member of the State Society.

Were we to countenance or to adopt any plan of organization other than that provided for by the Committee on Organization of the American Medical Association, it will readily be seen that the work would be chaotic and conflicting in all of its details.

I find, also, that there is some doubt on the part of the profession as to the power of the State Medical Society to make such a radical change in the organization—some even claiming it to be unconstitutional. I believe that every consistent and unbiased person will agree with me that the inherent power of an organization lies within itself; that it has the power to create a new organization and make it immediately

operative, which is only a counterpart of the plan adopted by the American Medical Association at the St. Paul meeting. If the national body, by a majority vote, decided this action to be legal, certainly we can use that as a precedent for the action of the State Medical Society at the Port Huron meeting in June. That meeting of our State Society was the largest and most representative meeting ever held, and the adoption of the report of the Committee on Reorganization was *unanimous*.

The plan adopted by the American Medical Association is that membership must be held successively in the County and State Societies in order for one to become eligible for membership in the American Medical Association.

It is to be regretted that any member can feel aggrieved over the present plan of organization of the profession of Michigan. Certainly every physician should take pride in trying to elevate the standard in his own locality, as around it must center the strength and professional ability of every physician within its jurisdiction. The County Society must be made strong and representative in every detail. The object of the organization is that we may have a harmonious combination of County, State and National organizations. To make any exception to this plan, to please any individual or society, would only mar the whole and create discord and confusion.

I sincerely trust that every physician, who is eligible to membership in our State Society, will carefully read our Constitution and By-Laws, and be governed by an unbiased judgment in its interpretation, and unite heartily in the work so auspiciously begun, and which is being carried forward so successfully by the great majority of the medical profession in our State.

A. E. BULSON,

President, Michigan State Medical Society.

I am in receipt daily of inquiries from other States asking for information relative to the American Confederation and its work, and I can safely and surely predict the rapid growth of medical reciprocity and uniformity of qualifications under the auspices of the American Confederation of Reciprocating Examining and Licensing Medical Boards. (B. D. Harison, M. D., Secretary.)

County Society News.

APPLICATIONS.

The State Society submits the following as a sample :

APPLICATION FOR MEMBERSHIP IN

The.....County Medical Society
.....County Branch of the
Michigan State Medical Society.

190.....

I hereby apply for membership in the.....
County Medical Society, agreeing to support its
Constitution and By-Laws and the Code of Ethics
of the American Medical Association.

(Signed).....

P. O. Address.....

Where Graduated.....Date.....

Other Degrees.....

Hospital or College Appointments.....

Member of other Societies.....

Date of License to Practice in Michigan.....

Date of Registration in.....County Clerk's

Office

Name of Member of this Society for Reference

N. B.—The Annual Dues of three dollars (to include
also membership in and dues to the Michigan State Medi-
cal Society, and its monthly Journal) must accompany
this application.

Wishing to make THE JOURNAL of the
greatest possible interest to the members
of all County Societies of the State, the
editor has sent the following letter to the
Secretary of each branch County Society:

Detroit, Nov. 25, 1902.

Dr.

Sec'y County Med. Soc.

Dear Sir:—THE JOURNAL OF THE
MICHIGAN STATE MEDICAL SOCIETY de-
sires to establish a column devoted to mat-
ters of interest and importance occurring
in all the County Societies of the State.
To this end we recommend that each
County make the Secretary of its Society
a reporter for that Society, and direct him
to send such information as he believes of
value and interest to THE JOURNAL for
publication.

We would further urge that the repor-
ter send to THE JOURNAL each month
short extracts of all papers read before his
Society and valuable papers in their en-
tirety. THE JOURNAL will endeavor to
make use of all such matter.

The State Society submits the follow-
ing as a sample of an Additional Appli-
cation :

ADDITIONAL FORM OF APPLICATION

For Active Membership in the.....County
Medical Society by those who have pro-
fessed to practice medicine
according to a dogma

In consideration of my application for active
membership in the.....County Medical
Society, made.....190.....
and in view of the fact that I have practiced medi-
cine according to the doctrine of the.....
school, I hereby agree that in the future I shall not
profess to practice according to this or any other
dogma; neither shall I form or maintain affiliation
with any institution or society of any kind what-
ever which countenances or supports such doctrine
or dogma.

.....M. D.

WAYNE COUNTY MEDICAL SOCIETY.

HUGH MULHERON, Detroit, Secretary.

"SEEING, YE SHALL SEE."

ABSTRACT OF A PAPER BY DAVID INGLIS, DETROIT.

The title of the paper refers to the significance of pathologic conditions which are to be seen upon the body. We all need to keep our eyes open to see what we should see and what is in plain sight. The course of a black eye shows that the blood breaks down and is absorbed, leaving only pigment, which is in turn absorbed. It is so with a clot on the brain. Be cautious against trephining in case of a blood clot of some time standing. A chronic ulcer of the leg is in plain sight, although quite a compendium of pathology. It may be a syphilitic ulcer, with its slowly spreading endarteritis, and consequent increase in the size of the ulcer. Now, imagine the same process involving the middle cerebral artery. Nothing is more characteristic of syphilitic ulcers than their varying progress. Nothing is more characteristic of cerebral syphilis than the varying phases. Vigorous treatment will improve either condition, but there is always a scar left. Thus we can see the conditions which underlie the terminal dementia of old cerebral syphilis. Again, in a senile ulcer, one sees the skin shrivel up, and realizes that the thickening arteries make it hard for the heart to pump the blood through. The same condition will be found in the cerebral vessels, which process accounts for the impeded blood circulation and the consequent symptoms—vertigo, forgetfulness, weakness and numbness of the extremities, etc. A blow on the head, sunstroke, excessive eating or drinking, long continued congestive migraine, cause a cerebral congestion similar to the condition found in the varicose ulcer of the leg, the essential conditions which underlie the chronic dementia. In the drunkard's nose is not only found the redness and the hypertrophy of the tissues, but also miliary aneurisms. The same conditions which have caused these aneurisms in the nose have operated upon the vessels of the brain, and rupture of a miliary aneurism is a common cause of cerebral hemorrhage. The author cites a case which had three attacks of herpetic eruptions, each attack lasting four days. Three times there were symptoms of acute meningitis, but each attack subsided in four days, it undoubtedly having been due to the same cause as that of the herpes. Warts of considerable size often disappear. In locomotor ataxia the growth is no more substantial than that of a

wart. In view of the fact that only in the later stages of tabes are the nerve structures destroyed, would it not suggest that some similar influence which removes a wart might obliterate the scar of tabes? To further illustrate the relation between visible conditions and symptoms due to internal disturbances, a case of alopecia areata, which spread to such an extent that not a hair on the body was left, was cited. This case developed acute dementia. Could it not be that the same cause, which was responsible for the alopecia, was also responsible for the mental condition? The contraction of the peripheral arterioles in the alopecia could easily be imagined to work in a similar manner in the brain.

The author believes that pathologists are too pessimistic. All the discoveries in medicine have not yet been made.

DISCUSSION.

A. E. CARRIER.

Dr. Inglis has drawn attention to a number of diseases of the skin. There is one in which we have the sudden loss of hair in spots, in which, after the disease has persisted for a time, there is undoubtedly atrophy. Sections have been made of these spots, and it has been found that the papillæ of the skin have almost entirely disappeared, showing undoubted nervous influence, the disease being, undoubtedly, a trouble of the nervous system, at the center, manifesting itself about these spots. In alluding to the wart, there are other conditions which are much like the wart, which follow the course of cutaneous nerves, along which the trouble is practically centered. One is lichen. Again, we find over certain regions, which are supplied by certain nerves, collections of water blisters. In the case of lichen, unless we consider the fact that there is a central origin for it, we may fail to get at the root of it, which is in the nervous system. In the same way in regard to the herpetic conditions the doctor spoke of. It may be that there are eruptions in the nerve trunk or at its root. It seems to me that the study of nervous diseases and the study of dermatological affections very closely lap, because they are so closely connected in cause and effect.

H. W. LONGYEAR.

I was thinking, as I listened to the doctor's paper, that old women are not so far from right when they speak of diseases striking in, as herpes. We have all of us seen other diseases, such as a chronic exudate, suddenly cease, and the patient at the same time have some serious internal symptoms, as dysentery or hemorrhage of the kidneys, etc.

JOHANN FLINTERMANN.

The doctor made a remark about peculiar symptoms of cerebral irritation in a case where a patient had repeated attacks of herpes zoster. There are cases, for instance, of asthma, which act in a similar way. There is another pathological condition, for instance, herpes of the mamma, which is always a preliminary symptom of carcinoma of the breast. I saw the case of a lady 75 years old, who had an attack of herpes, and a year afterwards she had carcinoma of the breast. Eczema is often a forerunner of carcinoma of the breast. We, as practitioners, are not in a condition to make laboratory investigations; but at the same time, at the bedside, if we watch certain pathological phenomena and study them, we would be able to get an idea, connecting what we see externally with some other pathological manifestations.

H. A. WRIGHT.

We must remember that Dr. Inglis is a very ingenious essayist, and unless we exercise great care we are liable to be led into error, and arrive at erroneous conclusions when reasoning by analogy, as the doctor has done. This thought was forced upon me as he read his essay, because of the conditions referred to. For instance, the black eye and the clot in the brain are similar organic changes, but in the case of the persistently progressive alopecia, concurrent with the primary dementia in the same patient, he would lead us to infer that there are similar, or some brain lesions, as there were in the scalp. Yet our pathologists have not yet shown any pathological changes in cases who have died of primary dementia, it being classed as an inorganic psychosis. We must not confuse this with so-called parietic dementia, a very different condition entirely. It is when we fail to distinguish between such different conditions that we are apt to fall into error.

A. W. IVES.

I think in reasoning by analogy it teaches us that there is a physical basis for every psychical and mental act; and when we call a disease a nervous disease or any other disease we use the word functional to express our ignorance. The fact that we can not find a lesion by the microscope does not mean that there may not be all sorts of abnormal conditions of the nervous system. The paper suggested that to me, instead of the opposite suggestion which Dr. Wright brings out.

W. WARREN.

It struck me in this paper that Dr. Inglis is making an unusually eloquent plea for the clinician—for the bedside student of medicine. Dr.

Inglis impresses upon us a little closer attention, a little more accuracy and intelligence of observation, and I think that that is a feature perhaps developed more by the English physicians than by ourselves. Those of us, particularly, who were trained more in laboratory methods and in diagnostic methods, by the results of the post-mortem examination microscopically, are apt to overlook the things which appeal to one's senses as the result of observation.

GUY L. CONNOR.

One of the most essential requirements of a successful physician is to see everything that is to be seen. For instance, a man had a pain in his thorax. symptoms of dyspnoea. Unsuccessful attempts had been made to diagnose the case correctly. The successful physician insisted upon removing the shirt, when, upon turning the patient on his side, a large tumor was seen projecting from his back. It turned out to be an aortic aneurism. Dr. Inglis' first illustration in regard to the black eye: I would suggest that in some cases the clot is not always absorbed—for instance, the case of a blow on the eye; afterwards a tumor develops in the eye. The tumor was dissected several years afterwards, and it turned out to be a blood clot.

DAVID INGLIS.

I purposely left out the organized blood clot, because when it once becomes organized it is no longer a clot—it has now become an organized structure, and the problem is a wholly different one. That, years after a cerebral hemorrhage, we may find a cicatrix where the clot once was, is true; but we are then face to face with the problem whether anything can be gained by removing an old cicatrix and leaving, behind the operation, a new one.

Dr. Warren has said that the English medical men are better clinical physicians than we are. I think he is correct in this. The best text-books on practice of medicine are by English writers. So true is this that some of the older authors, who antedated the pathology of our day, are, nevertheless, most instructive teachers to-day, and that because of their wonderful acuteness of clinical observation.

To Dr. Wright let me reply thus: I did not say that there was an exact correspondence in time between the alopecia and the dementia—indeed, the one preceded the other, but I believe that the one process throws light upon the other. It is true, as Dr. Wright says, that in primary dementia we are generally unable to demonstrate visible pathological changes, but that in both the alopecia and the dementia there was a pathological change seems almost a necessary proposition.

No one would, I think, dispute the proposition that underlying the alopecia, preceding it and causing it, was some widespread general change in the nutritive processes, in all probability in the blood supply. It is equally unthinkable that the dementia was not in similar relation to nutrition of the brain neurons.

The case seems to me to illustrate, in the clearest way, the fact that physical causes underlie mental changes, even when these processes can not be made visible to us.

OFFICIAL MINUTES OF THE GENERAL SESSION OF THE MICHIGAN STATE MEDICAL SOCIETY AT THE ANNUAL MEETING, JUNE 26 AND 27, 1902.

Wednesday, June 26, 9 a. m.

Called to order by the President, Leartus Connor, Detroit.

Address of welcome by the Mayor, Hon. Fred T. Moore.

Report of the Executive Committee, C. B. Stockwell, Port Huron.

Report of the Treasurer, Chas. E. Hooker, Grand Rapids:

"The funds of the Society have been received and disbursed as follows:

RECEIPTS:

Cash on hand at 1901 meeting...	\$ 658.07
Amount collected 1901 meeting..	907.00
From W. H. Haughey, balance from exhibitors	30.00
From J. H. Kellogg, for half-tones in 1901 book.....	29.80
Dues collected since 1901 meeting	1,108.00
From Dr. Willy Myer, New York, one copy 1901 book....	1.50
	<hr/> \$2,734.37

DISBURSEMENTS:

Honorarium to Secretary for 1901	\$ 300.00
Honorarium to Treasurer for 1901	150.00
Reporting proceedings of 1901 meetings	165.00
Printing 1901 transactions.....	903.59
Miscellaneous printing, stationery, postage	175.00
Distributing transactions	111.76
Printing programs, containers and mailing same.....	102.00
Committee expenses	83.54
Secretary's expense	18.77
Treasurer's expense	11.33
Michigan Passenger Association.	5.00

Bank exchange70
Upper Peninsula Medical Society, Beaumont Memorial	257.50
Of \$100 appropriation for Pathological Committee	4.50
Refunded to postponed applicant.	5.00
	<hr/> 2,293.69

Cash balance\$ 440.68

ASSETS:

Cash on hand\$440.68

LIABILITIES: None."

Report accepted.

The Treasurer then submitted a report in regard to the right of the Society to charge the initiation fee of \$2.00, which report was referred to the Judicial Council, and by the Council declared to be unauthorized:

"The Judicial Council of the Society begs to report as follows:

Concerning the interpretation of the by-laws relative to the collection of a membership fee of \$2.00 as distinct from annual dues of \$3.00, the Judicial Council holds that at present there is no authority for the collection of a membership fee of \$2.00; that the total amount collectable under the wording used in the by-laws, viz.: membership fee and annual dues, is \$3.00.

B. D. HARISON.

A. W. ALVORD.

H. B. LANDON."

Report accepted.

Report of the Secretary, A. P. Biddle, Detroit:

"The following were elected to membership from the meeting of 1901 to the meeting of 1902, inclusive:

D. A. Link, Volinia; Chas. Wetherbee, Jones; Anna S. Rundell, Flint; P. I. Edwards, Jackson; Rhoda G. Hendrick, Jackson; T. C. Henry, Jackson; Peter Hyndman, Jackson; J. C. Kugler, Jackson; Jas. McColgan, Grass Lake; E. A. Martindale, Jackson; Martha C. Strong, Jackson; Ralph E. Balch, Kalamazoo; H. O. Statler, Kalamazoo; Wm. Blake, Lapeer; D. L. Treat, Adrian; G. H. Drake, Pontiac; Jeremiah Jacklin, Saginaw; Geo. S. Tweedie, Sanilac Centre; L. M. Ardeil, Avoca; Geo. C. Brock, Smith's Creek; A. L. Callery, Port Huron; J. L. Chester, Port Huron; A. Henri Cote, Port Huron; Thos. E. De Gurse, Marine City; W. P. Derck, Marysville; Jas. A. Frazer, Port Huron; T. F. Heavenrich, Port Huron; W. S. Henderson, Port Huron; A. D. MacLaren, Port Huron; H. R. Mills, Port Huron; R. E. Moss, Port Huron; G. S. Ney, Port Huron; Geo. Treadgold, Port Huron; W. H. Hutchins, Ann Arbor; W. H. Morley, Ann Arbor; G. R. Pray, Ann Arbor; C. G. Anderson,

Detroit; J. F. Bennett, Detroit; Berthold Bertram, Detroit; Leo. Breisacher, Detroit; G. L. Connor, Detroit; J. E. Davis, Detroit; L. J. Goux, Detroit; E. W. Haass, Detroit; W. A. Hackett, Detroit; L. J. Hirschman, Detroit; Wm. B. James, Eloise; Guy L. Kiefer, Detroit; Wm. C. Martin, Detroit; R. T. Mason, Detroit; I. L. Polozker, Detroit; S. E. Sanderson, Detroit; F. T. F. Stephenson, Detroit; A. Thuner, Detroit; H. R. Varney, Detroit; S. J. Wilson, Detroit; H. A. Wright, Detroit; Duncan A. Cameron, Alpena; A. F. Hagadorn, W. Bay City; D. A. Zwrightman von Noppen, Niles; Geo. R. Hyde, Prairieville; Jas. C. McGregor, Flint; Rich'd H. Wood, Montrose; H. B. Anderson, Traverse City; B. F. Green, Hillsdale; P. D. Bourland, Lake Linden; W. H. Coffron, Grindstone City; J. Sylvester Corcoran, Uby; W. J. Herrington, Bad Axe; D. J. McCall, Elkton; D. D. Munro, Kinde; E. F. Shaw, Williamston; John Gillette, Sparta; C. H. Fairbanks, Grand Rapids; Wm. J. DuBois, Grand Rapids; W. J. Kay, Attica; Edward C. Van DeWalker, Sutton's Bay; Isabell R. Copp, Northport; Zimmerman Ross, Rexton; Theo. A. Smith, Mt. Clemens; A. A. Parisot, Mt. Clemens; J. F. O'Keefe, Mt. Clemens; W. T. Lungershausen, Mt. Clemens; Richard Leuschner, Mt. Clemens; W. T. Atkinson, Marlette; J. E. Campbell, Brown City; L. E. Cochran, Peck; W. J. Foster, Lexington; J. W. Scott, Sanilac Centre; Geo. Sementon, Marlette; J. N. Eldred, Chesaning; William Shaw, Morrice; V. C. Van Liew, Lennon; Wm. I. Whittaker, Durand; E. J. Buck, Capac; Alex. Thompson, Adair; E. P. Tibbals, Port Huron; W. G. Wight, Yale; W. A. Ferguson, Sturgis; A. N. Treadgold, Cass City; E. K. Herdman, Ann Arbor; E. R. Williams, Ann Arbor; Mary G. Haskins, Detroit; O. E. Fischer, Detroit; E. W. Eede, Detroit; W. R. Chittick, Detroit; J. N. Biel, Detroit; G. J. Anderson, Detroit.

The following were dropped at the meeting for non-payment of dues:

*Joseph Beisman, Detroit; †J. N. Buckham, Flint; F. L. Burdon, New Baltimore; W. H. Chivers, Jackson; U. A. D. Collelmo, Wheeler; *W. J. Cree, Detroit; F. W. Edelman, Saginaw; Joseph Foster, Lansing; J. E. Handy, Watrous-ville; Don. Johnson, Marion; H. M. Joy, Calumet; R. J. Kirkland, Grand Rapids; *E. G. Knill, Detroit; John Lee, Detroit; J. I. Mabee, Rockwood; Ora Manly, Ann Arbor; F. G. Novy, Ann Arbor; W. H. Taylor, Clio; E. H. Troy, Detroit; J. E. Wilson, Rochester.

*Restored since through the Wayne Co. Medical Society.

†Restored since through the Genesee Co. Medical Society.

Address of the President: See Journal, Vol. 1, Nos. 1 and 2, September and October, 1902.

Recommendations of the President referred to a committee of five: E. L. Shurly, V. C. Vaughan, J. B. Griswold, A. W. Alvord, and P. D. Patterson.

Report of the Committee on Reorganization, appointed during the year by the President—A. E. Bulson, Geo. Dock, C. T. McClintock—being in substance a new Constitution and By-Laws, adjusting the Society to the reorganized American Medical Association, which was unanimously adopted. (See Constitution and By-Laws, Journal, Vol. 1, No. 2, October, 1902.)

Report of the Michigan Members of the House of Delegates of the American Medical Association—H. O. Walker, chairman:

"The meeting of the A. M. A. at St. Paul, last year, by amending the Constitution and By-Laws, made it mandatory that the business of that body should be done by a House of Delegates. This House of Delegates consists of members of permanently organized State and Territorial Medical Societies, elected by those bodies, together with delegates elected by Sections of the Association, and one delegate each from the several departments of the army, navy and marine hospital service. According to the provisions for representation this State was entitled to two delegates. As the Society did not meet after the meeting at St. Paul, or before the meeting at Saratoga Springs, it became necessary for our President to make the appointments in the interim, and he appointed your reporter one of the delegates, and as his confrere, Dr. V. C. Vaughan. It will therefore be your duty at this meeting to elect our successors.

The House of Delegates met pursuant to call at the United States Hotel, Saratoga Springs, N. Y., June 10, 1902.

The first order of business was the report of the Secretary, the first part of which referred to the immense labor which the Committee on Organization had to perform in reference to the recommendations of the A. M. A. in the adoption by the State and Territorial Societies of the plan for reorganization. They were rewarded in their efforts by a willingness and desire to co-operate with the A. M. A. He called attention to the necessity of some radical and other minor changes in the By-laws to conform to existing conditions, and as to who are and should be members of the A. M. A. This report was referred to the Business Committee.

The next order of business was the report of

the Board of Trustees. It consisted of the report of the Treasurer, as to the entire business of the year 1901, showing an income from all sources to be \$149,985.66, with a net gain over all expenses of \$26,018.11.

A Code of Medical Ethics was submitted, and on motion referred to a committee.

Second session convened Wednesday, June 11, at 2:15 p. m.

Dr. Foshay, of Cleveland, then read the following resolution, which was adopted: "*Resolved*, That State Associations or Societies, in counting members for a basis of delegate representatives in this House, shall count only members in good standing, who pay regular dues to the State Association, either directly or indirectly, through County Societies."

The committee reported against Voluntary National Examining Boards.

Dr. Bevan, of Chicago, presented the following: "*Resolved*, That the House of Delegates recommend the adoption by the County Medical Societies in affiliation with this body the following resolution: '*Resolved*, That any member of the County Medical Society proven guilty of division of fees, either the giving or the receiving of part of a fee, without the full knowledge of the patient, be held guilty of misconduct, for which he may be expelled from the County Medical Society.'" This resolution was seconded and carried.

Report accepted.

H. O. Walker, Detroit, and V. C. Vaughan, of Ann Arbor, were then elected to continue to act as the Michigan members of the House of Delegates of the American Medical Association until their successors are elected in regular form.

Action on the amendments to the Constitution and By-laws, as presented in the program of the meeting, were indefinitely postponed.

Nominations for President—A. E. Bulson, Jackson; J. C. Willson, Flint.

Nomination for Secretary—A. P. Biddle, Detroit.

Friday, June 27, 11 a. m.

Report of the Committee on Admissions: G. W. Lowry, Chairman.

Names included in minutes of the report of the Secretary.

Report accepted.

Report of the Committee on Necrology: W. F. Breakey, Ann Arbor. See Journal, Vol. 1, No. 3, November, 1902.

Special Committee to petition the Legislature with reference to an improved plan of registration of births and deaths, continued.

Report of Committee on Legislation: B. D. Harison, Chairman. See Journal, Vol. 1, No. 2, October, 1902.

Report accepted.

Report of Committee on National Legislation: Emil Amberg. See Journal, Vol. 1, No. 2, October, 1902.

Report accepted and adopted.

Report of Special Committee to prepare a pathological exhibit for the meeting of 1902: P. M. Hickey, Chairman.

Report accepted and adopted, and \$100 voted to defray the expenses of next year.

Committee to petition the Legislature for an appropriation for the establishment of a properly equipped Sanitarium for the treatment of the early stages of tuberculosis, continued.

Report of the Committee on Finance: M. W. Gray, Pontiac, Chairman.

Report accepted. Accounts of Treasurer found to be correct.

Customary honorarium of \$300 to the Secretary and \$150 to the Treasurer allowed.

Report of Committee on President's Address: "Your committee, to which was referred the suggestions of the President's address, begs leave to report as follows:

His suggestions relate to two distinct objects, viz.: First, an increase in the practical value of the Michigan State Medical Society; second, improved methods for placing this within the reach of each member of the profession.

The committee recommends the adoption of the following five preambles and resolutions; the first three make the Society more valuable, while the first and last two aim to bring it in close touch with the entire profession:

THE JOURNAL OF THE MICHIGAN STATE MEDICAL SOCIETY.

WHEREAS, It is believed that the publication of the transactions of the Michigan State Medical Society, as a monthly journal, instead of yearly, would advance the interests of the profession;

Resolved, That the President be instructed to appoint two members, who with the Secretary shall be the Publication Committee, of which the Secretary shall be chairman.

HONORARY MEMBERS.

WHEREAS, One by one our members become incapacitated for active service;

WHEREAS, It is desirable to retain within our ranks, till death, all who have rendered the Mich-

igan State Medical Society either long or unusually distinguished service;

Resolved, That the Committee on Reorganization be instructed to provide for a roll of Honorary Members, to present a method for their selection, and to define the eligibility of members to this list.

RECIPROCITY IN MEMBERSHIP OF STATE MEDICAL SOCIETIES.

WHEREAS, The value of membership in the State Society would be increased if a system of reciprocity in membership were arranged with other States having similar requirements as Michigan;

Resolved, That the Secretary, President and Committee on Reorganization be directed to investigate and ascertain whether other States would entertain such a reciprocity;

Resolved, That if this committee found such States willing, they be empowered to make final arrangements, announce the same to our members, and provide for its incorporation into our organic laws.

COUNCILORS.

WHEREAS, It is necessary to actively promote the organization, stimulate the development and nurture the life of local medical societies;

Resolved, That the Committee on Reorganization be hereby directed to select a Councilor from each congressional district, with especial reference to his fitness for promoting local organizations within his district;

Resolved, That the expenses of each Councilor, to the limit of \$25 yearly, be paid by the Treasurer, on presentation of properly certified vouchers;

Resolved, That these Councilors be appointed for one year after this meeting, or till their successors are elected. Their duties shall be the promotion in their districts of new local Societies, the reviving of old ones, the fostering of all, and the adjustment of misunderstandings, of the individual or of the Society;

Resolved, That the Councilors organize immediately after appointment, arrange for their work, hold at least one yearly meeting in connection with the Vice-Presidents, and submit to this Society their annual report.

Resolved, That the Councilors be authorized, at their discretion, to recognize existing Societies as County Societies, and also to recognize those that shall be formed, and to grant charters to the same.

VICE-PRESIDENTS—NEW DUTIES.

WHEREAS, It is desirable to utilize every means for the healthful formation and growth of local Societies;

Resolved, That the Nominating Committee be directed to select the Vice-Presidents for their

fitness in working with the Councilors, in the interests of the local Societies;

Resolved, That in so far as possible they select one Vice-President for each three congressional districts, so that he may easily co-operate with the Councilors of those districts.

Resolved, That immediately after appointment, each Vice-President be directed to place himself in relation to his three Councilors, and assist in planning for the early and effective development of the local Societies, within their three congressional districts;

Resolved, That the Vice-Presidents meet with the Councilors and aid in their efforts to bring every reputable doctor within the membership of the Michigan State Medical Society.

(Signed)

E. L. SHURLY,
VICTOR C. VAUGHAN,
J. B. GRISWOLD,
A. W. ALVORD,
P. D. PATTERSON,

Committee.

Port Huron, Mich., July 27, 1902."

Unanimously adopted.

Report of the Judicial Council:

"Concerning charges made against W. D. Wilson and W. C. Cronin, of Mt. Clemens, members of this Society, for unprofessional conduct, the Judicial Council finds as follows: On account of the absence of Dr. W. D. Wilson through illness, the Council recommends that his case be continued. It finds, however, that Dr. Cronin has been guilty of grossly unprofessional conduct, and recommends his expulsion from the Society for such unprofessional conduct.

B. D. HARISON.
A. W. ALVORD,
H. B. LANDON."

Report accepted and adopted.

On motion of V. C. Vaughan, of Ann Arbor, the Committee on Reorganization was empowered further to revise the Constitution and By-Laws as in its judgment seemed best, especially in regard to the subject of fees, the amendments to have full force and to go immediately into effect.

See Journal, Vol. 1, No. 2, October, 1902.

Report of the Committee on Nominations: Samuel Bell, Chairman:

President—A. E. Bulson, Jackson.

1st Vice-President—J. C. Willson, Flint.

2nd Vice-President—A. W. Crane, Kalamazoo.

3rd Vice-President—W. K. West, Calumet.

4th Vice-President—H. B. Garner, Traverse City.

Secretary—A. P. Biddle, Detroit.

Treasurer—Chas. E. Hooker, Grand Rapids.

Place of Meeting—Detroit, June 11 and 12, 1903.

In accordance with the resolution from the Committee on President's Address, adopted by the Society, the chairman of the Committee on Reorganization, A. E. Bulson, reported the membership of the Council as follows:

First District—Leartus Connor.

Second District—N. H. Williams, Jackson.

Third District—W. H. Haughey, Battle Creek.

Fourth District—G. W. Lowry, Hastings.

Fifth District—J. B. Winery, Grand Rapids.

Sixth District—C. B. Burr, Flint.

Seventh District—O. Stewart, Port Huron.

Eighth District—S. I. Small, Saginaw.

Ninth District—B. H. McMullen, Cadillac.

Tenth District—H. B. Landon, Bay City.

Eleventh District—W. T. Dodge, Big Rapids.

Twelfth District—Theo. A. Felch, Ishpeming.

The report was unanimously adopted.

Adjournment.

A. P. BIDDLE, *Secretary*.

SECRETARY'S NOTES, NOV. 20, 1902.

On July 10th, the Committee on Reorganization met at the Russell House, Detroit, with the Council, and made the required changes in the Constitution and By-Laws, which, according to the authority given it, have all the force of the original.

In this will be found incorporated the several resolutions recommended by E. L. Shurly's committee.

Thus, the Council is made the Publication Committee, the Finance Committee, as well as having the duties of Judicial Council, and those of the organization and development of the County Societies. It further elects the Secretary and Treasurer. The present Council holds office till the House of Delegates elects its successor.

Provision is made for securing a reciprocity of membership with other State Societies having requirements equal to Michigan; and for keeping members till their death by a system of Honorary Membership, in close touch with the operations of the Society.

The Vice-Presidents and President have additional duties given them, in aiding the Council in its work of organizing and developing branch Societies.

Full details are given for starting and conducting the monthly journal of the Society.

In the matter of fees, the annual dues are reduced to two dollars per year, payable to the Treasurer of the Branch Societies.

Leartus Connor, Detroit, was elected Chairman, and W. H. Haughey, Battle Creek, Secretary of the Council.

To date the following County Medical Societies have been chartered and made Branches of the State Society:

1. Aug. 8—Calhoun.
2. Aug. 15—Wayne.
3. Aug. 28—Hillsdale.
4. Sept. 16—Bay.
5. Sept. 19—Oakland.
6. Sept. 20—Livingston.
7. Sept. 20—Houghton.
8. Sept. 20—Mecosta.
9. Sept. 23—Branch.
10. Sept. 25—Eaton.
11. Sept. 30—O. M. C. O. R. O.—Counties of Otsego, Montmorency, Crawford, Oscoda, Roscommon and Ogemaw.
12. Sept. 30—Wexford.
13. Oct. 6—Montcalm.
14. Oct. 15—Saginaw.
15. Oct. 17—Monroe.
16. Oct. 17—Ionia.
17. Oct. 23—Mason.
18. Oct. 23—Grand Traverse.
19. Oct. 29—Manistee.
20. Nov. 2—Sanilac.
21. Nov. 7—Allegan.
22. Nov. 8—Van Buren.
23. Nov. 10—Lapeer.
24. Nov. 15—Genesee.
25. Nov. 17—Gratiot.
26. Nov. 17—Barry.
27. Nov. 28—Jackson.

A. P. BIDDLE, *Secretary*.

There will be a meeting of the Council at the Russell House, Detroit, January 6, 1903, to consider the many important questions which have arisen in connection with the work of organization.

Books Received.

The Physicians' Visiting List for 1903. P. Blakiston's Son & Co.

Transactions of the Colorado State Medical Society for 1902.

Gynecology, Obstetrics, Menopause, by A. H. P. Leuf, M. D. The Medical Council, Philadelphia, Pa.

The Physician's Pocket Account Book. The Medical Council, Philadelphia, Pa.

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HEADQUARTERS, HOTEL CADILLAC

To the Counties of Michigan

It is earnestly urged that the medical profession of the Counties in which no County Societies now exist, meet and organize; that the County Societies now in existence meet and amend their Constitutions and By-Laws to conform with the requirements of the State Society.

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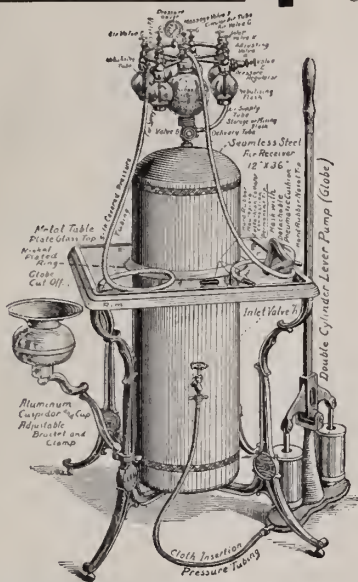
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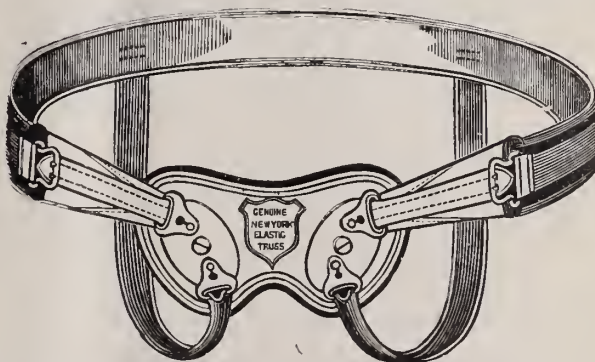
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Published Monthly under the Supervision of the Council

The Official Organ of the State and County Societies of Michigan

Entered Sept. 6, 1902, at Detroit, Mich., as second-class mail matter, under Act of Congress of March 3, 1879.

Volume I
Number 2

DETROIT, OCTOBER, 1902

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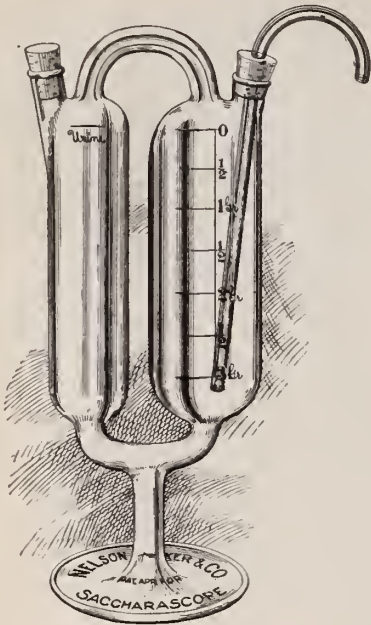
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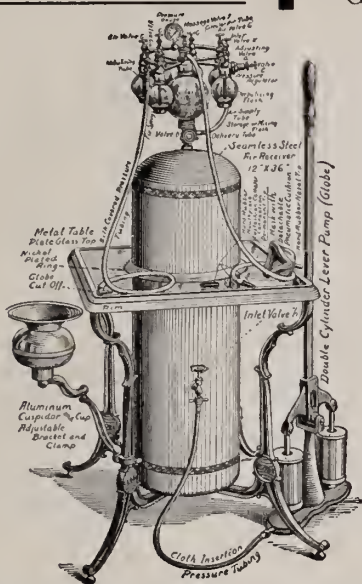
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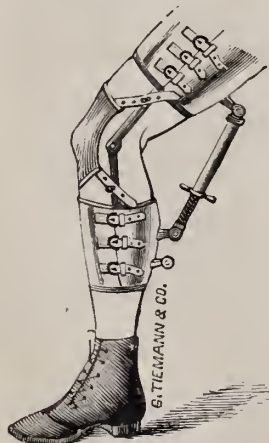
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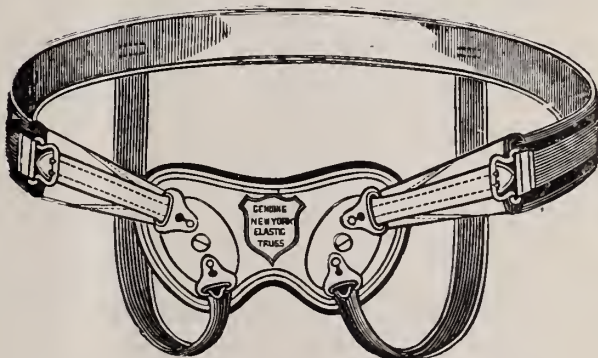
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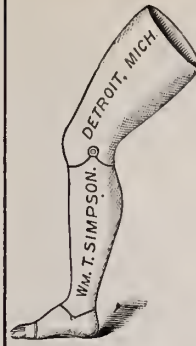
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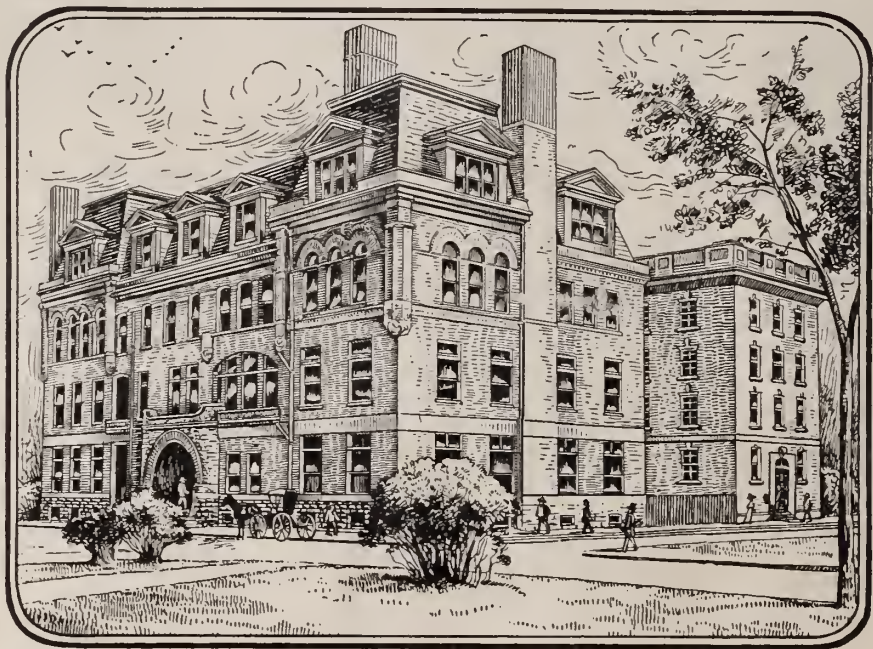
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Published Monthly under the Supervision of the Council

The Official Organ of the State and County Societies of Michigan

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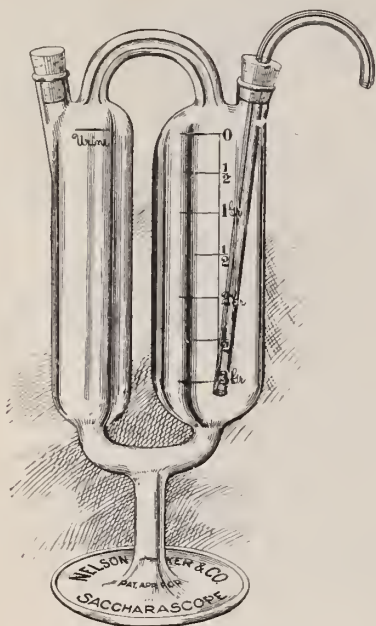
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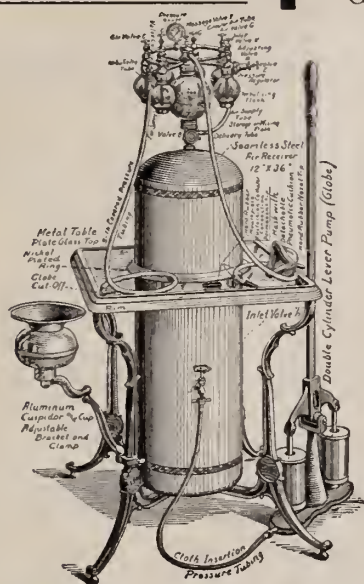
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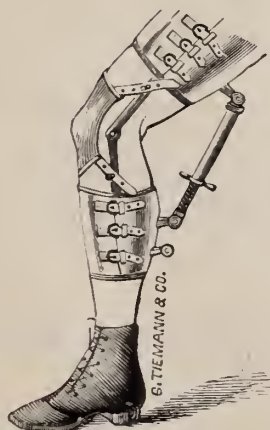
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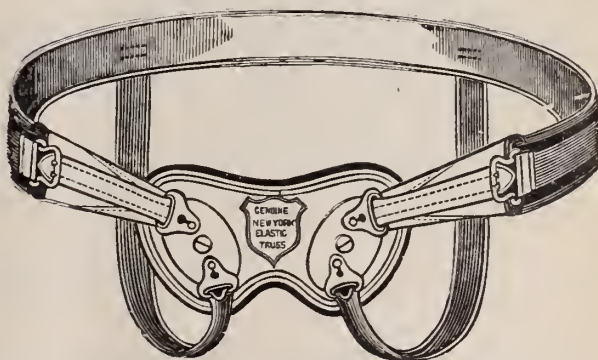
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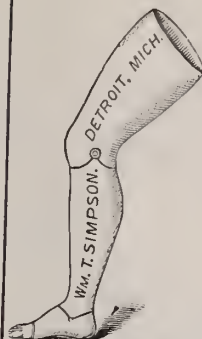
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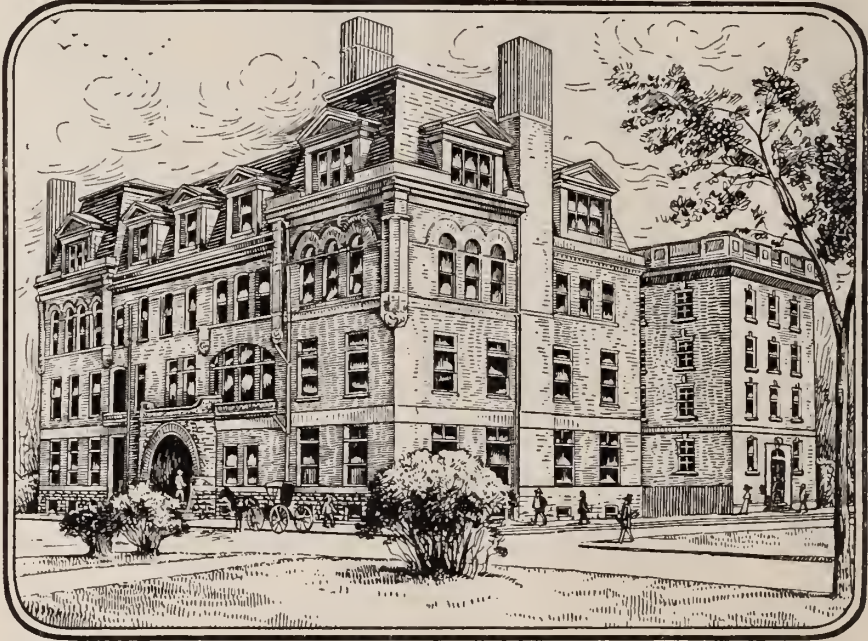
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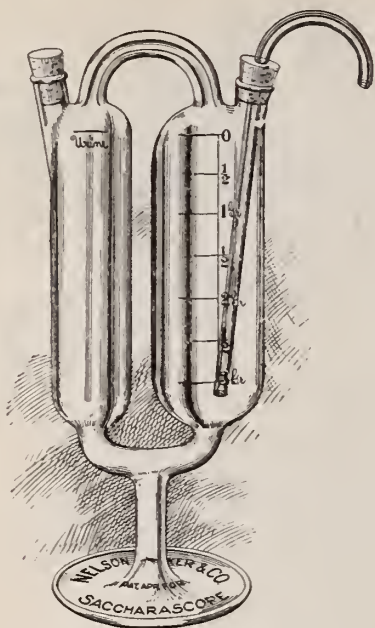
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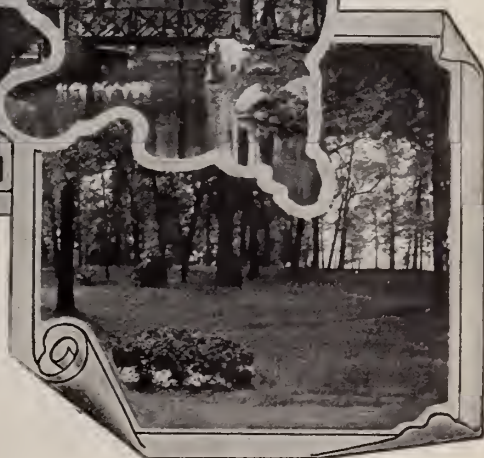
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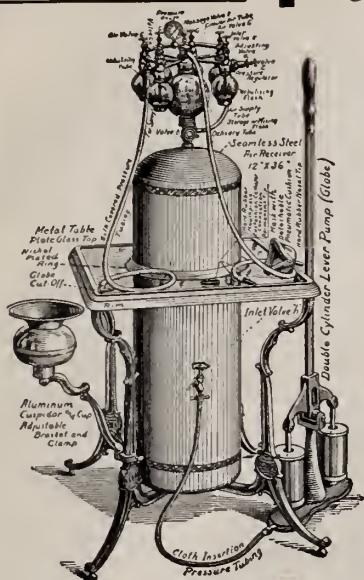
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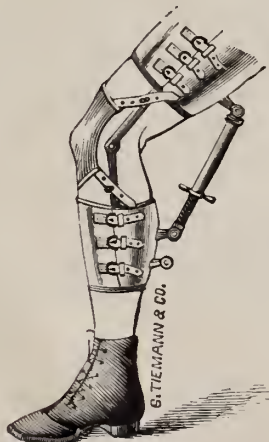
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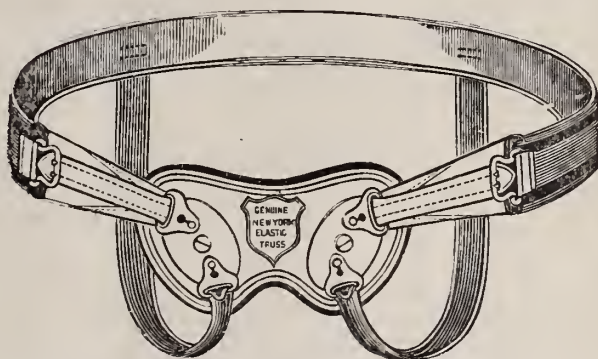
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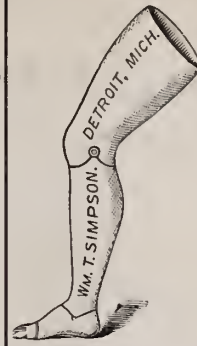
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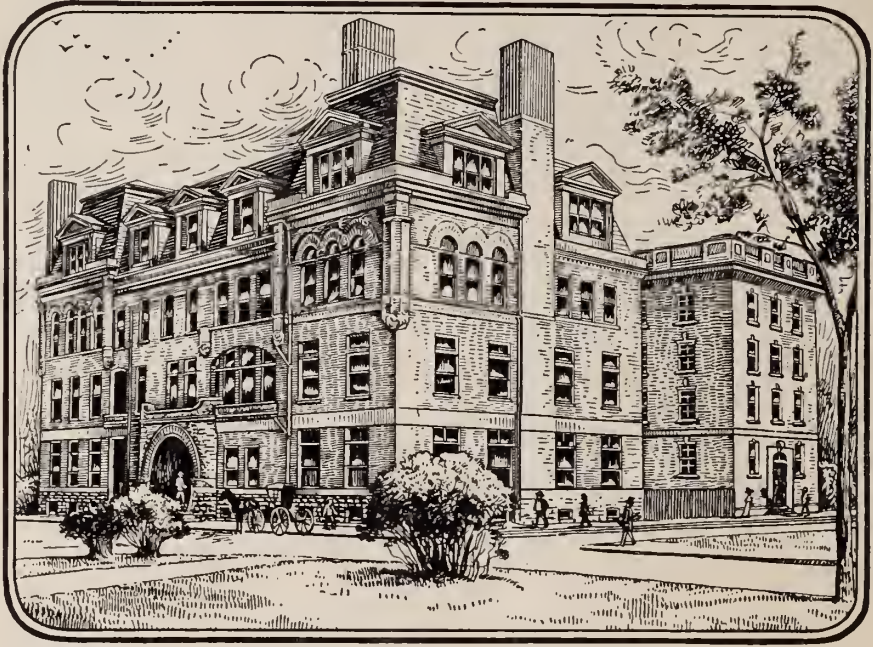


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